

# The West Bengal Factories Rules, 1958

WEST BENGAL

India

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### Rule THE-WEST-BENGAL-FACTORIES-RULES-1958 of 1958

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The West Bengal Factories Rules, 1958 Published Vide Notification No. 2049-L.W./IR-12/68 dated 24th October 1968 Labour Department Government of West Bengal Notification (As amended up to 1st January, 2006) No. 1693 L.W./LW/IR-37/57-22nd May 1958.- In exercise of the power conferred by section 112 and, in particular, by sections 6(1), 7, 8(1), 9 10(4), 11(1) 12(2), 15(1), 17(4), 18(4) 19(3), 20(2), 21(2), 22(1), 23(2), 29(2), 31(2), 34(2), 35, 36(6) 37(5), 38(1), 38(7), 42(2), 45(1), 45(4), 46, 47, 48(3), 53(2), 59(4), 59(5), 60, 61(8), 62(2), 72(3), 73(20,76,80,83,87,88,89(1), 107(1), 108(1), 109 and 110 of the Factories Act, 1948 (LXIII of 1948) and in supersession of all previous rules on the subject, the Governor is pleased to make after Previous publication as required by section 115 of the said Act, the following rules namely:-

## Chapter I Preliminary

### 1. Short title, extent and commencement.

(1) These rules may be cited as the West Bengal Factories Rules, 1958 (2) These rules shall extend to the whole of West Bengal. (3) Save as otherwise expressly provided elsewhere in these rules, these rules shall come into force at once.

### 2. Definitions.

- In these rules unless there is anything repugnant in the subject or context: (a) "The Act" means the Factories Act, 1958, and "section" means a section of the Act. (b) "Artificial Humidification" means the introduction of moisture into the air of a room by any artificial means whatsoever, except the unavoidable escape of steam or water vapour into the atmosphere directly due to a manufacturing process: Provided that the introduction of air directly from outside through moistened mats or screens placed in opening at times when the temperature of the room is [26.7 degrees or more, shall

not be deemed to be artificial humidification. [Vide Notification No. 2049-L.W./L.W./IR-12/68 dated 24th Oct. 1968](c) "Belt" includes any driving strap or rope.(d) [ "Degree" (of temperature) means degrees on the Centigrade scale.] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991](e) [ "Form" means a form appended to these rules.] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991](f) [ "Fume" includes gas or vapour.] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991](g) [ "Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards constructions and maintenance.] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991](h) [ "Inspector" means an officer appointed under sub-section (I) of Section 8 of the Act and includes the Joint Chief Inspector of Factories, Deputy Chief Inspector of Factories and Junior Inspector of Factories.] [Clause (h) inserted by West Bengal Factories Amendment Rules, 1991](i) "Maintained" means maintained in an efficient [state] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991] in efficient working order and in good repair.](j) [ "Septic tank latrine" means a latrine of the Septic tank type, together with its filter beds, and includes activated sludge latrines and aerobacterial latrines.] [Renumbered the clause '(e)', '(g)', '(h)', '(i)', '(k)' and '(l)' as '(d)', '(e)', '(f)', '(g)', '(i)' and '(j)' respectively. vide West Bengal Factories Amendment Rules, 1991]

## **2A. [ Rule prescribed under section 2 (Ca) and section 112. [Rule 2A, inserted by West Bengal Factories Amendment Rules, 1991, Notification No. 1183-LW/IR-1/91 dated 27.11.1991.]**

(1)Competent Person - The Chief Inspector may, on an application made as nearly as possible in Form No. 29, recognise any person as a "competent person" as stipulated in the Act and the rules made thereunder, for such period as may be specified for the purposes of carrying out test, examinations, inspections and certifications for building, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure vessels and plants, confined space, ventilation system and such other process or plant and equipment located in a factory, if such a person possesses the qualifications, experience and other requirements as set out in the schedule - AA annexed to this rule. Provided that the Chief Inspector may, subject to such condition as he may direct in writing, relax the qualifications prescribed in the said Schedule - AA in respect of a "competent person" but not the requirements in respect of the facilities at his command. Provided further that the "competent person" recognised under this rule shall not be above the age of 65 years and shall be physically fit for the purposes of carrying out the tests, examination and inspections.(2)The Chief Inspector may, on an application made as nearly as possible in Form No. 29A, recognise an institution or reputed, having persons possessing qualifications and experience as set out in the Schedule annexed to this rule as a "competent person" as stipulated in the Act and the rules made thereunder, for such period as may be specified for the purpose of carrying out tests, examinations, inspections and certification for buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure vessels and plants, confined space, ventilation system and such other

process or plant and equipment in a factory.]

## AA

(See rule - 2A)

Sl. No.	Section or Rules under which competency is recognised	Qualification required	Experience for the purpose	Facilities at his command
1	2	3	4	5
1	Rules made under section 6 and 112 of the Act- Certificate of stability for buildings.	Degree in Civil or Structural Engineering or equivalent.	(i) A minimum of 10 years experience in the design of or repairs construction or testing structures; (ii) Knowledge of non destructive testing, various codes of practices that are current and the effect of the vibrations and natural forces on the stability of the building; and (iii) Ability to arrive at a reliable conclusion with regard to the safety of the structure of the building.	To be decided by the Chief Inspector of Factories from time to time.
2.	Rules made under section 21(2) of the Act- "Dangerous Machines".	Decree in Electrical or Mechanical or Textile Engineering or equivalent.	(i) A minimum of 7 years experience in - (a) design or operation or maintenance ; or (b) testing, examination and inspection of relevant machinery, their guards, safety device and appliances. (ii) He shall - (a) be conversant with safety devices and their proper functioning; (b) be able to identify defects and	Gauges for measurement; instruments for measurement of speed and any other equipment or devices to determine the safety in the use of the dangerous machines

			any other cause leading to failure; and (c) have ability to arrive at a reliable conclusion with regard to the proper functioning of safety device and appliance and machine guard.	
			(i) A minimum experience of 7 years in—(a) design or erection or maintenance; or (b) Inspection and test procedures of lifts and hoists. (ii) He shall be—(a) Conversant with relevant codes and practices and tests procedures that are current; (b) conversant with other statutory requirements covering the safety of the Hoists and Lifts (c) able to identify defects and arrive at a reliable conclusion with regard to the safety of Hoists and Lifts.	
3.	Section 28 of the Act-Lifts and Hoists	A degree in Electrical and/or Mechanical Engineering or its equivalent.		Facilities for load testing, tensile, testing, gauges, equipment/gadgets for measurement and any other equipment required for determining the safe working conditions of Hoists and lifts.
4.	Section 29 of the Act-Lifting Machinery and Lifting Tackles.	Degree in Mechanical or Electrical or Metallurgical Engineering or its equivalent.	(i) A minimum experience of 7 years in—(a) design or erection or maintenance; or (b) testing, examination and inspection of lifting machinery, chains, rope and lifting tackles. (ii) He shall be —(a) Conversant with relevant codes of practices and test	Facilities for load testing, tensile, testing, heat treatment equipment/gadgets for measurement, gauges and such other equipment to determine the safe working conditions of the lifting machinery lifting tackles.

			<p>procedures that arecurrent;(b) Conversantwith fracture mechanics and Metallurgy of the material ofconstruction;(c) Conversantwith heat treatment/stress relieving techniques as applicable tostress bearing components and parts of lifting machinery andlifting tackles;(d) capable of identifying defectsand arriving at a reliable conclusion with regard to the safetyof lifting tackles.</p>
5.	Section 31 of the Act 'Pressure Plant"	Degree in Chemical or Electrical or Metallurgical orMechanical Engineering or its equivalent.	<p>(i) A minimum experienceof 10 years in –(a)design or erection or maintenance, or(b) testing,examination and inspection of pressure plants.(ii) He shall be–(a) Conversantwith the relevant codes of practices and test procedures relatingto pressure vessels;(b) conversantwith statutory requirements concerning the safety of unfiredpressure vessels and equipment operating under pressure.(c) Conversantwith non destructive testing techniques as are applicable topressure</p> <p>Facilities for carrying out hydraulic test, non-destructivetest, gauges equipment, gadgets for measurement and any otherequipment or gauges to determine the safety in the use ofpressure vessels.</p>

			vessels.(d) able to identify defects and arrive at a reliable conclusion with regard to the safety of pressure plants.	
			(i) A minimum experience of 7 years in collection and analysis of environmental samples and calibration of monitoring equipment,(ii) He shall be —(a) Conversant with hazardous properties of chemicals and their permissible limit values;(b) conversant with the current techniques of sampling and analysis of the environmental contaminants ;(c) able to arrive at reliable conclusion as regards the safety in respect of entering and carrying out hot work.	
6.	Section 36 of the Act- Precautions against dangerous fumes.	Master's Degree in Chemical or a degree in Chemical Engineering.		Meters, instruments and devices duly calibrated and certified for carrying out the tests and certification of safety in working in confined spaces.
7.	Ventilation system as required under various schedules framed under section 87 of the Act such as Schedules on (i) Grinding or glazing of metals and processes incidental thereto (ii) Cleaning or smoothing or roughening etc. of articles, by a jet or sand, metal shot, or grit, or other abrasive propelled by a blast of compressed air or steam. (iii) Handling and processing of asbestos; (iv)	Degree in Mechanical or Electrical engineering or equivalent	(i) A minimum experience of 7 years in the design, fabrication, installation, testing of ventilation system and systems used for extraction and collection of dusts, fumes and vapours and other ancillary equipment (ii) He shall be Conversant with relevant codes of practice and test	Facilities for testing the ventilation system, instruments and gauges for testing the effectiveness of the extraction system for dusts, vapour and fumes, and any other equipment needed for determining the efficiency of these systems. He shall

Manufacture of Rayon  
by viscose process; (v)  
Foundry operations.

procedures that are  
current in respect of  
ventilation and a  
traction system for  
fumes, and shall be able  
to arrive at a reliable  
conclusion with regard  
to effectiveness of the  
system.

have the assistance  
of a suitable  
qualified technical  
person who can  
come to a  
reasonable  
conclusion as to  
the adequacy of the  
system.

(3) The Chief Inspector, on receipt of an application in the prescribed form from a person or an institution intending to be recognized as a "competent person" for purposes of the Act and the rules made thereunder, shall, within a period of sixty days of the date of receipt of application, either after having satisfied himself as regards competence and facilities available at the disposal of the applicant, recognize the applicant as a "competent person" and issue a certificate of competency in Form No. 29B for such purpose as may be specified therein or reject the application specifying the reasons therefore.

#### **4. The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency issued under sub-rule(3)**

(i) if he has reason to believe that a competent person - (a) has violated any condition stipulated in the certificate of competency; or (b) has carried out a test, examination and inspection or has acted in a manner inconsistent with the intent or the purpose of the Act and the rules made thereunder; or (ii) for any other reason to be recorded in writing, Explanation: For the purpose of this rule, an institution includes an organization. (5) [The Chief Inspector may, for reasons to be recorded in writing, require recertification of any building, dangerous machinery, hoist and lift, lifting machine, lifting tackle, pressure vessel and plant, confined space or ventilation system, as the case may be, which has been certified by a competent person. (6) All previous recognitions and the certificates of competency issued to persons or institutions for the purposes of the Act and the rules made thereunder, shall stand revoked with the commencement of this rule] [Substituted by Notification No. 340 LW/LW/IR-4/85 dated 2nd April 1986] Rules to 12 prescribed under sub-section (1) of section 6 [and section 112] [Inserted by ibid]

### **3. Approval of site and plan**

(1) No building, part of building or structure, shall be constructed. extended. or taken into use as a factory or a part of factory on any site unless previous permission in writing has been obtained from the Chief Inspector for the site and for the construction, extension or use of the building. part of a building or structure on such site. Application for such permission shall be made as nearly as possible In Form No. 1 which shall be accompanied by the following documents : (a) A flow chart of the manufacturing process supplemented by a brief description of the process in its various stages. (b) Plan in duplicate showing - (i) the site of the factory and immediate surroundings including

adjacent buildings, and another structures, roads, drains, etc; and(ii)the plan, elevation and necessary cross-sections of the various buildings drawn to scale indicating all relevant details relating to construction of walls and roofing, natural lighting, ventilation and means of escape in case of fire.The plans shall also clearly indicate the position of the plant and machinery, aisles and passage ways.(c)Such other particulars as the Chief Inspector may require.(2)If the Chief Inspector is satisfied that the plans are in consonance with the requirements of the Act, he shall , subject to such conditions as he may specify, approve them by signing, and returning to the applicant one copy of each plan; or he may call for such other particulars as he may require to enable such approval to be given.(3)No deviation of any kind from approved plans shall be made without the written permission of the Chief Inspector.(4)[ Copies of the approved plans shall be preserved and be readily available for examination by the inspector on demand.] [Schedule A B C substituted by Amendment Rules, 1991 dated 27th Nov. 1991]

### **3A. [ Submission of plans. [Inserted vide Not No. 340 LW/LW/I.R. - 4/85 dt 2.4.1986.]**

- The Chief Inspector may require for the purpose of the act, submission of plans of any factory which was either in existence on the date of commencement of the Act or which has not been constructed or extended since then. Such plans shall be drawn to scale showing -(a)the site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains, etc.(b)the plan elevation and necessary cross sections of the factory buildings indicating all relevant details relating to safety of the building or structure, natural lightings, ventilation and means of escape in case of fire and the position of the plant and machinery, aisles and passageway and(c)such other particulars as the Chief Inspector may require.]

## **4. Application for registration and grant of licence.**

(1)[ The occupier of every factory shall submit to the Chief Inspector an application as nearly as possible in Form No.2 in duplicate for its registration and grant of licence at least fifteen days before the occupier begins to occupy or use any premises as a factory.(2)Every such application shall be accompanied by a treasury receipt showing payment of fees specified in the Schedules 'A', 'B' and 'C' hereto as the case may be.(3)The Chief Inspector may call for such other particulars as he may require before registration and grant of licence.] [ Substituted by ibid][Schedule -A]Scale of Fees Payable for Licence and Annual Renewal of Licence for Factories defined under section 2 (m) (i) of the Factories Act, 1948 other than Electricity Generating Stations.

Note: 1.

H.P. =

0.7557

K.W.

Total

amount of

installed



power in  
K.W.  
(H.P.)  
Maximum  
number of  
workers to  
be  
employed  
on any day  
during the  
year

			1	2	3	4	5	6	7	8	9
	Over	Not over	10 to 20	21 to 50	51 to 100	101 to 250	251 to 500	501 to 750	751 to 1000	1001 to 1500	1501 to 2000
A .....	7.457 (10) or under		Rs.250	Rs.500	Rs.875	Rs.1900	Rs.3750	Rs.6600	Rs.9450	Rs.12300	Rs.18150
B.....	7.457 (10)	37.285 (50)	450	700	1075	2200	4050	6900	9750	12600	18750
C.....	37.285 (50)	74.57 (100)	700	950	1325	2550	4400	7250	10100	12950	19500
D.....	74.57 (100)	186.425 (250)	950	1200	1600	2950	4800	7650	10500	13350	20250
E.....	186.425 (250)	372.85 (500)	1200	1500	1900	3350	5200	8050	11250	14100	21000
F.....	372.85 (500)	745.7 (1000)	1450	1800	2200	3800	5650	8500	12000	14850	21750
G.....	745.7 (1000)	1491.4 (2000)	1750	2100	2500	4250	6100	8950	12750	15600	22500
H.....	1491.4 (2000)	3728.5 (5000)	2050	2400	2800	4700	6600	9450	13500	16500	24000
I.....	3728.5 (5000)	7457 (10000)	2450	2850	3250	5150	7100	9950	15000	18000	27000
J.....	7457 (10000)	and over	2900	3300	3700	5600	7600	10500	16500	19500	30000

[Schedule - B] [Substituted vide Notification No. 1044-L.W./1R-2/2001, dated 20-12-2005, w.e.f. 1-1-2006] Scale of Fees payable for Licence and Annual Renewal of Licence for Electricity Generating Stations only.

	Total installed capacity of the generating plants in K.W.	Number of workers to be employed	Fees payable
1	2	3	4

A	50 K.W. or less	10 or above	325.00
B	Over 50 K.W.- not over 100 K.W.	-do-	650.00
C	Over 100 K.W.- not over 150 K.W.	-do-	1050.00
D	Over 150 K.W.- not over 300 K.W.	-do-	1500.00
E	Over 300 K.W.- not over 750 K.W.	-do-	2250.00
F	Over 750 K.W.- not over 1000 K.W.	-do-	3500.00
G	Over 1000 K.W.- not over 5000 K.W.	-do-	6500.00
H	Over 5000 K.W.- not over 10000 K.W.	-do-	11250.00
I	Over 10000 K.W.- not over 50000 K.W.	-do-	18750.00
J	All over 50,000 K.W.		
(a) upto 60,000 K.W.	-do-	22500.00	
(b) upto 80,000 K.W.	-do-	26250.00	
(c) upto 100,000 K.W.	-do-	30000.00	
(d) upto 150,000 K.W.	-do-	37500.00	
(e) upto 200,000 K.W.	-do-	45000.00	
(f) upto 300,000 K.W.	-do-	52500.00	
K	All over 300,000 K.W. (without limit)	-do-	60000.00

[Schedule - C]

**1. Scale of fees payable for licence and Annual Renewal of Licence for Factories wherein no power is used, i.e. Factories as defined in section 2(m) (ii) of Factories Act, 1948.**

Maximum number of workers to be employed on any day during the year.	Fees payable Rs.
A. 20 to 30	250.00
B. 31 to 50	375.00
C 51 to 100	650.00
D 101 to 200	950.00
E 201 to 300	1250.00
F 301 to 500	2200.00
G 501 to 750	3150.00
H 751 to 1000	4125.00

I All Over 1000 without any upward limit

6000.00

2. Fees payable for granting Licence and Annual Renewal of Licence by Factories declared under section 85 of the Act - Rs.250.

Note: (1) These Schedules of fees shall come into force with effect from the first of January of 2006.(2)For deposit of the difference of fees between the old and the revised rates, in respect of the year 2006, the specified time for the purpose of rules 6 and 7 shall be on or before the expiry of three months from the date of publication of this amendment of the rules in the Official Gazette." ;]

## **5. [ Grant of licence. [Substituted vide notification no. 340 L.W./L.W./IR-4/85.]**

(1)The Chief Inspector may on the application being made to him under sub-rule (1) of rule 4 and on payment of fees required under sub-rule (2) of that rule and on being satisfied that there is no objection to the grant of licence applied for, register the factory and grant a licence as nearly as possible in Form No. 3 subject to compliance with such condition as may be specified in the licence:Provided that where the Chief Inspector refuses to grant licence, he shall record in writing the reasons for such refusal and communicate the same to the applicant.(2)Every licence granted under this rule shall remain in force upto the 31st December of the year for which the licence is grants.] [Substituted vide Notification No. 1044-L.W./1R-2/2001, dated 20-12-2005, we.f. 1-1-2006.]

## **6. [ Renewal of Licence. [Substituted vide Notification No. 340LW/LW/IR-4/85 dated 2nd April 1986.]**

(1)Every application for renewal shall be submitted as nearly as possible in Form No.2, induplicate, to the Chief Inspector, on or before the 31 December of the year prior to that to which the application relates.(2)The fee that shall be charged for the renewal of a licence shall be subject to the scale of fees laid down in Schedule A or Schedule B or Schedule C as may then be applicable to the factory in respect which application for renewal of licence is submitted to the Chief Inspector:Provided that if the fee for renewal of licence is not deposited within the time specified in Sub-rule (1), then, notwithstanding any other action which may be taken, the amount of the fee payable for renewal of the Licence shall be 25 per cent in excess of the amount which would otherwise be payable, if the payment is made within three calendar months of the time specified and shall be 50 per cent in excess of the amount which would otherwise be payable for further default beyond three calendar months. The Chief Inspector may, however, waive payment of excess fee if he is satisfied that there was sufficient reason for delay in payment:Provided further that if part of the renewal fee is paid within the due date then the excess fee shall only be payable on the balance due.(3)The Chief Inspector may call for such other particulars as he may require before renewing a licence.(4)The Chief Inspector may, on application being made to him under sub-rule (1) and on payment of fees prescribed in sub-rule (2), and on being satisfied with the requirement of the act and the rules made thereunder renew a licence in the Form No. 3 subject to compliance with such conditions as he may think fit.(5)Every licence renewed under this rule shall remain in force upto the 31st December of the year for which the licence is renewed.] [Substituted vide Notification No. 1044-L.W./1R-2/2001, dated 20-12-2005, w.e.f. 1st January, 2006.]

**7. [ Amendment of licence. [Substituted vide Notification No. 340LW/LW/IR-4/85 dated 2nd April 1986.]**

(1)A licence granted under rule 5 and renewed under rule 6 may be amended by the Chief Inspector.(2)A licence whose licence requires to be amended shall submit to the Chief Inspector an application as nearly as possible in Form No.2.(3)The Chief Inspector may call for such other particulars as he may require for amendment of licence.(4)A licensee whose licence requires to be amended by virtue of increase in the number of workers to be employed or additional power to be installed shall pay a fee of [rupees fifty]; plus the amount by which the fee payable for the amended licence exceeds the fee already paid for the licence:Provided that if the application together with original receipted challan showing payment of fee payable for amendment under this sub-rule is not submitted prior to the date on which the licence requires to be amended, then, notwithstanding any other action which may be taken, the amount of fee payable for such amendment shall be [rupees fifty] [Substituted vide Notification No. 1044-LW./1R-2/2001, dated 20-12-2005.]; plus 50 per cent in excess of the amount by which the fee payable for the amended licence exceeds the fee already paid for the licence.]

**8. [ Transfer of licence. [Substituted vide Notification No. 340 LW/LW/IR-4/85 dated 2nd April, 1986.]**

(1)(a)the holder of a licence may, at any time before the expiry of the licence, apply to the Chief Inspector for permission to transfer his licence to another [occupier].(b)The Chief Inspector may call for such other particulars as he may require.(2)The Chief Inspector may, if he approves of the transfer, enter upon the licence under his signature, an endorsement to the effect that the licence has been transferred to the [occupier] [+ Substituted by (Amendment) Rules, 1991 dated 27.11.1991] named.(3)A fee of [rupees fifty] [Substituted vide Notification No. 1044-L.W./1R-2/2001, dated 20-12-2005.] rupees shall be charged on each such endorsement. The [occupier] [Substituted by (Amendment) Rules, 1991 dated 27.11.1991] to whom the licence is to be transferred shall submit a notice of occupation as nearly as possible in Form No.2, and shall pay the endorsement fee.]

**9. [ Use of premises as factory. [Substituted vide Notification No. 340 LW/LW/IR-4/85 dated 2nd April 1986.]**

(1)An occupier shall not use any premises as a factory unless a licence has been issued in respect of such premises and is in force for the time being:[Provided that if application for grant, renewal, amendment or transfer of licence with all particulars in Form No.2 has been submitted along with treasury receipt showing that correct fee has been deposited, the premises shall be deemed to be duly licenced until such date as the Chief Inspector may allow or renew, amend or transfer the licence or refuse in writing to do so, as the case may be.](2)The licence or a copy of the licence shall be displayed at a conspicuous place at or near the main entrance to the factory.]

## **10. Procedure on death or disability of licensee.**

- If a licensee dies or becomes insolvent, or otherwise disabled, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for the [transfer of the licence under rule 8] [Substituted by (Amendment) Rules, 1991 dated 27.11.1991] in his own name for the unexpired portion of the original licence.

## **11. Loss of licence.**

- Where a licence granted under these rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of rupees [ten] [Substituted by (Amendment) Rules, 1991 dated 27.11.1991].

## **12. [Mode of payment of fees.] [Substituted vide Notification No. 340 LW/LW/IR-4/85 dated 2nd April 1986.]**

(1) Every application under these rules shall be accompanied by a treasury receipt showing that the appropriate fee has been paid into the local treasury under the head of account 087-Labour and Employment (Provincial)-Fees realized under Factories Act.[Provided that when the head of account under which the licence fees have to be deposited is changed, the Chief Inspector may direct the occupiers to deposit fees payable under this sub-rule under such other head of account as he may specify.] [Added vide Notification No. 340 LW/LW/IR-4/85 dated 2nd April 1986](2) If an application for the grant, renewal, amendment or transfer of a licence is rejected, the fee paid shall be refunded to the applicant, on a pay order issued by the Chief Inspector of Factories.[Rules 13 and 13A prescribed under sections 7 and 112] [Added vide Notification No. 340 LW/LW/IR-4/85 dated 2nd April 1986]

## **13. The notice of occupation and particulars of the factory shall be as nearly as possible in Form No.2.**

### **13A. [ Notice of change of manager [Rule 13A substituted by (Amendment) Rules, 1991 and Rule 13B inserted by ibid.]**

- The occupier of a factory shall submit a notice, as nearly as possible in Form No. 3A, to the Inspector Whenever there is a change of manager in the factory.

### **13B. Guidelines, instructions and records.**

(1) Without prejudice to the general responsibility of the occupier to comply with the provisions of section 7A of the Act, the Chief Inspector may, from time to time, issue guidelines and instructions regarding the general duties of the occupier relating to health, safety and welfare of all workers

while they are at work in the factory.(2)The occupier shall maintain such records in Form No. 30 in respect of monitoring of work environment in the factory.(3)The occupier of a factory shall furnish any information that the Chief Inspector may require regarding the provisions and maintenance of the arrangements with respect to the health, safety and welfare of the workers while they are at work in the factory.]

## Chapter II

Inspecting StaffRule prescribed under section 8(1).

### 14. Appointment of Inspectors.

- No person shall be appointed as Inspector for the purpose of the Act, unless he possesses the qualifications for such Inspectors in the [West Bengal State Services] [Added vide Notification No. 340 Lw/Lw/IR-4/85 dated 2nd April 1986] Recruitment Rules at the time of his appointment.Rule prescribed under section 9.

### 15. [ Power of Inspectors. [Substituted by Notification no. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.]

- An Inspector shall, for the purposes of the Act, have power to do all or any of the following things-(a)to photograph any worker, to inspect, examine, measure, copy, photograph, sketch, direct testing of or test, as the case may be, any building or room, any plant machinery, appliance or apparatus, article or substance, any register or document or anything provided for in order to give effect to the provisions of the Act:(b)in the case of an inspector who is a duly qualified medical practitioner, to carry out such medical examination as may be necessary;(c)to seize or to take copies of such registers, records or other documents of portions thereof as he may consider relevant in respect of an offence under the Act, which he has reasons to believe, has been committed;(d)enquire into any accident or dangerous occurrence whether causing bodily injury, disability or disease, or the possibility of any accident or disease; and(e)to prosecute, conduct or defend before a court any complaint or other proceeding arising under the Act or in the discharge of his duties as an Inspector.]Rule prescribed under sub-section (4) of section 10 and section 76.

### 16. Duties of Certifying Surgeon.

(1)For purposes of the examination and certification of young persons who wish to obtain certificates of fitness, the Certifying Surgeon shall arrange a suitable time and place for the attendance of such persons, and shall give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him.(2)The Certifying Surgeon shall issue his certificates as nearly as possible in Form No. 4. The foil and counter-foil shall be filed in and the left thumb mark of the person in whose name the certificate is granted shall be taken on them. On being satisfied as to the correctness of the entries made therein and of the fitness of the person examined, he shall sign the foil and initial the counter-foil and shall deliver the foil to the

person in whose name certificate is granted. The foil so delivered shall be the certificate of fitness granted under section 69. All counter-foils shall be kept by the Certifying Surgeon for a period of at least 2 years after the issue of the certificate.(3)The Certifying Surgeon shall, upon request by the Chief Inspector, carry out such examination and furnish him with such report as he may indicate for any factory or class or description of factories where-(a)cases of illness have occurred which it is reasonable to believe are due to the nature of the manufacturing process carried on, or other conditions of work prevailing therein, or(b)by reason of any change in the manufacturing process carried on, or in the substances used therein, or by reason of the adoption of any new manufacturing process or of any new substance for use in a manufacturing process, there is a likelihood of injury to the health of workers employed in that manufacturing process, or(c)young persons are, or are about to be, employed in any work which is likely to cause injury to their health.(4)For the purposes of the examination of persons employed in process covered by the rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigning to him at such intervals as are prescribed by the rules relating to such dangerous operations.(5)At such visits the Certifying Surgeon shall examine the persons employed in such processes and shall record the results of his examination in a register known as the Health register which shall be kept in Form No. 17 by the factory manager and produced to the certifying Surgeon in each visit.(6)If the Certifying Surgeon finds as a result of his examination, that any person employed in such process is no longer fit for medical reasons to work in that process, he shall suspend such person from working in the process at such time as he may think fit and no person after suspension shall be employed in that process without the written sanction of the Certifying surgeon in the Health Register.(7)The manager of a factory shall afford to the Certifying Surgeon facilities to inspect any process in which any person is employed or is likely to be employed.(8)The Manager of a factory shall provide for the purpose of any medical examination which the Certifying Surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an-examination) a room which shall be properly cleaned and adequately ventilated and lighted and furnished with a screen, a table (with writing materials) and chairs.(9)[ If the examination of persons employed in process covered by the rules relating to dangerous operations cannot be carried out at the factory owing to the special nature of any examination that may be necessary, the manager of the factory shall arrange to send such persons to such place as may be required by the Certifying surgeon] [Vide Notification No. 100 L.W. dated 20th August 1964].

## Chapter III

### Health

Rule prescribed under section 11(1)(d)(ii)

#### 17. Washing of inside walls & partitions.

- In every factory all inside walls and partitions, all ceiling or tops of rooms and all walls, sides and tops of passages and staircases, if painted, varnished or having a smooth impervious surface, shall be washed with water once in every period of fourteen months, if necessary, by soap and brush. Register prescribed under sub-section (1) of section 11.

## 18. Record of white washing, etc.

- The record of dates on which white washing, colour-washing, varnishing, etc., are carried out shall be entered in a register maintained as early as possible in Form No. 6 Rule prescribed under sub-section (2) of section 12

## 19. [ Disposal of trade wastes and effluents. [Rule 19 Substituted by West Bengal Factories, (Amendment) Rule, 1991, dated 27.11.1991.]

- The arrangements made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein shall be in accordance with those approved by the State Board for the Prevention and Control of Water Pollution constituted under the Water (prevention and Control of Pollution) Act., 1974 (6 of 1974), the State Board for Prevention and Control of Air Pollution constituted under the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) and the Public Health Engineering Directorate of the state Government.]

## 19A. [ Ventilation and Temperature. [Rule 19A inserted by (Amendment) Rule, 1991, dated 27.11.1991.]

(1) In any factory the maximum wet-bulb temperature of air in a work-room at a height of 1.5 meters above the floor level shall not exceed 30 degrees centigrade and adequate air movement with a velocity of at least 30 meters per minute shall be proved and, in relation to dry-bulb temperature, the wet-bulb temperature in the workroom at the said height shall not exceed what is shown in the schedule below :-]

Dry - bulb temperature	Wet - bulb temperature
30°C to 34°C	29°C
above 34°C upto 39°C	28.5°C
above 39°C upto 44°C	28°C
above 44°C upto 47°C	27.5°C

Provided that if the temperature measured with a thermometer inserted in a hollow globe of 15 centimeters diameter coated mat black outside and kept in the environment for not less than 20 minutes exceeds the dry-bulb temperature of air, the temperature so recorded by the globe thermometer shall be taken in place of the dry-bulb temperature :Provided further that when the reading of wet-bulb temperature outside in the shade exceeds 27 degree centigrade, the value of the wet bulb temperature allowed in the schedule for a given dry-bulb temperature may be correspondingly exceeded to the same extent :Provided also that the requirement as aforesaid shall not apply in respect of factories covered by section 15 of the Act and in respect of factories where the nature of work carried on involves production of excessively high temperature referred to in clause (ii) of sub-section (1) of section 13 of the. Act to which workers are exposed for short periods of time not exceeding one hour followed by an interval of sufficient duration in thermal environments not exceeding those otherwise laid down in these rules.Provided also that the Chief Inspector, having



due regard to the health of the workers, may, in special and exceptional circumstances, by an order in writing exempt any factory or part of a factory from this sub-rule, in so far as restricting the thermal conditions within the limits laid down in the schedule concerned, to the extent he may consider necessary, subject to such conditions as may be specified in the order.(2)If it appears to the Inspector that in any factory, the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in sub-rule (1), he may, subject to the control of the Chief Inspector, serve on the manager of the factory an order requiring him to provide sufficient number of whirling hygrometers or any other type of hygrometers and direct that the dry-bulb and wet-bulb reading in each such workroom shall be recorded, at such locations as may be approved by the Inspector, twice during each working shift by a person especially nominated for the purpose by the manager and approved by the Inspector.(3)If the Inspector has reasons to believe that a substantial amount of heat is added inside the environment of a workroom by radiation from walls, roof or other solid surroundings, he may, subject to the control of the Chief Inspector, serve on the manager of the factory an order requiring him to provide one or more globe thermometer(s) referred to in the first proviso to sub-rule (I), to place them at places as specified in the order and to keep a record of the temperature in a suitable register which shall be kept available for examination by an Inspector at all times during working of the factory.(4)In every factory the amount the ventilation opening in a work room below the eaves shall, except where mechanical means, if ventilation as required by sub-rule (3) are provided, be of an aggregate area of not less than 15% of the floor area and shall be so located as to afford a continued supply of fresh air :Provided that the Chief Inspector may relax the requirement as aforesaid if he is satisfied that having regard to the location of the factory. orientation of the workroom, prevailing wind, roof height and the nature of manufacturing process carried on, sufficient supply of fresh air into the workroom is afforded during most part of the working time :Provided further that such requirement shall not apply in respect of workrooms of factories -(i)covered by section 15 of the Act ; or(ii)in which temperature and humidity are controlled by refrigeration.(5)Where in any factory owing to special circumstances such as situation with respect to adjacent buildings and height of the buildings with respect to floor space, the requirement of ventilation openings under sub-rule (4) cannot be complied with or, in the opinion of the Inspector, the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in sub-rule (I), he may, subject to the control of the Chief Inspector, serve on the manager of the factory an order requiring him to provide additional ventilation either by means of roof ventilators or by mechanical means.(6)The amount of fresh air supplied by mechanical means of ventilation in an hour shall be equivalent to at least six times the cubic capacity of the workroom and shall be distributed evenly throughout the workroom without dead airpockets or undue draughts caused by high velocities of inlet air.(7)In regions, where in summer (from 15th March to the 15th July) dry-bulb temperature of outside air in the workroom of a factory during most part of the day exceeds 35 degree centigrade and simultaneously wet-bulb temperature is 25 degree centigrade or below and, in the option of the Inspector, the manufacturing process carried on therein permits thermal environment with relative humidity of 50% or more, the Inspector may, subject to the control of the Chief Inspector. serve on the manager of the factory an order requiring him to have sufficient supply of outside air as needed for ventilation cooled by passing it through water spray either by means of unit type of evaporative aircooler (desert cooler) or, where supply of outside air is provided by mechanical means through ducts in a plenum system. by means of control air washing plants.

## 19B. For permission level of certain substances schedule

- For permissible levels of certain substances in work environment without prejudice to the requirements of any other provisions of the Act or these rules, the requirements specified in the schedule below shall apply to ail factories so far as it relates to compliance with section 14 of the Act.

### Schedule 2

#### 1. Definition For the purpose of this Schedule -

(a)"mg/m<sup>3</sup>" means milligrams of a substance per cubic meter of air;(b)"mppcm" means million particles of a substance per cubic meter of air;(c)"ppm means parts of vapour or gas per million parts of air by volume at 25°C and 760 mm of mercury pressure;(d)"time weighted average concentration" means the average concentration of a substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at that location, spread over the entire shift on any day, after giving weight age to the duration for which each sample is collected and the concentration prevailing at the time of taking the sample. Formula Time Weighted Average concentration

$$= \frac{C_1T_1 + C_2T_2 + \dots + C_nT_n}{T_1 + T_2 + \dots + T_n}$$

Where C<sub>1</sub> represents the concentration of the substance for duration T<sub>1</sub>(in hours);C<sub>2</sub> represents the concentration of the substances for duration T<sub>2</sub> (in hours); and C<sub>n</sub> represents the concentration of the substance for duration T<sub>n</sub> (in hours);(e)"work location" means a location in a factory at which a worker works or may be required to work at any time during any shift on any day.

**2. Limits of concentration of substances at work location.- (a) In case the air at any work location contains a combination of substances indicated in the Second Schedule to sub section (1) of Section 41F of the Factories (Amendment) Act, 1987 which have similar toxic properties, the time weighted concentration of each of these substances during the shift should be such that when this time weighted concentration divided by the respective prescribed permissible time weighted average concentration specified in the said Second Schedule, and the fractions obtained are added together, the total shall not exceed unity, that is to say,**

$$\frac{C_1}{L_1} + \frac{C_2}{L_2} + \dots + \frac{C_n}{L_n} \text{ should not exceed unity.}$$

When C<sub>1</sub>, C<sub>2</sub>,..... C<sub>n</sub> being the time weighted concentration of toxic substances 1, 2, ..... and in respectively, determined after measurement at work location, and L<sub>1</sub>, L<sub>2</sub>, ..... L<sub>n</sub> are the prescribed permissible time weighted average concentration of the toxic substances 1, 2, ..... and 'n' respectively as indicated in the said Second Schedule.(b)In case the air at any work location contains a combination of substances, mentioned in the said Second Schedule, and these substances do not have similar toxic properties, then the time weighted concentration of each of these

substances shall not exceed the prescribed permissible time weighted average concentration, specified for that particular Substances.

**3. Sampling and evaluation procedures - (a) Notwithstanding provisions in any other paragraphs of the Schedule under this rule, the sampling and evaluation procedures to be adopted for checking compliances with the provisions shall be as per standard procedures in vogue for the time being.**

(b)Notwithstanding the provisions of paragraph 5, the conditions regarding the sampling and evaluation procedures relevant to checking compliance with the provisions of this rule shall be as specified below:-(i)for determination of the number of particles per cubic metre, samples shall be collected by standard of midget impinger and the counts made by light-field techniques;(ii)the percentage of quartz in the three formulae as specified in the Second Schedule to sub-section (1) section 41 F of the Act, shall be determined from airborne samples;(iii)both for determination of concentration and of percentage of quartz for use of the formulae as specified in the Second Schedule to sub-section (1) of Section 41 F of the Act, the fraction passing through a size selector with following characteristics shall be only considered:

Aerodynamic diameter(unit densitysphere)	percentage allowed by size-selector
2.0	90
2.5	75
3.5	50
5.0	25
10.0	0

**4. (a) An Inspector may serve on the occupier or the manager of a factory an order requiring him, before any specified date, to assess the time weighted average concentration at any work location of any of the substances mentioned in the Second Schedule to sub-section (I) of Section 41 F of the Act as being used in the factory.**

(b)The results of such assessment as well as the method followed for such sampling and the analysis for such assessment shall be sent to the Inspector within 3 days from the date of completion of such assessment or from the date specified in the order under sub-paragraph (a) which ever is earlier, and a record of all particulars of every such assessment shall be maintained and kept readily available for inspection by an Inspector for examination at all times during working of the factory.

**5. Exemption - If, in respect of any factory or a part of a factory, the Chief Inspector, after being satisfied that by virtue of the pattern of working time of the workers at different work locations or on account of other circumstances, no worker is exposed in the air at the work locations to any of the**

**substances specified in the Second Schedule to sub section (l) of section 41F of the Act to such an extent as is likely to be injurious to his health, may by an order in writing exempt the factory or a part of the factory from the requirements of paragraph 2, subject to such conditions, if any, as may be specified in the order."**

Rules 20 to 30 prescribed under sub-section (l) of section 15.1

## **20. When artificial humidification not allowed.**

- There shall be no artificial humidification in any room of a cotton spinning or weaving factory :  
(a) by the use of steam during any period when the dry bulb temperature of that room exceeds 1 Substituted By W. B. Factories (Amendment) Rules, 1991[29.5 degree centigrade.]  
(b) at any time when the wet bulb reading of the hygrometer is higher than that specified in the following schedule in relation to the dry bulb reading of the hygrometer at that time; or as regards a dry bulb reading intermediate between any two dry bulb readings indicated consecutively in the schedule when the dry bulb reading does not exceed the wet bulb reading to the extent indicated in relation to the lower of these two dry bulb readings :

**[Substituted by West Bengal Factories (Amendment) Rules, 1991]**

Readings in degrees centigrade

Dry-bulb	Wet-bulb	Dry-bulb	Wet-bulb	Dry-bulb	Wet-bulb
15.5	14.5	25.0	24.0	34.5	30.0
16.0	15.0	25.0	24.0	35.0	30.5
16.5	15.5	26.0	25.0	35.5	31.0
17.0	16.0	26.0	25.5	36.0	31.0
17.5	16.0	27.0	26.0	36.5	31.5
18.0	16.5	17.5	26.0	37.0	31.5
18.5	17.0	28.0	26.5	37.5	31.5
19.0	18.0	28.0	27.0	38.0	32.0
19.5	18.5	29.0	27.0	38.5	32.0
20.0	19.0	29.5	28.0	39.0	32.0
20.5	19.5	30.0	28.0	39.5	32.5
21.0	20.0	30.5	28.5	40.0	32.5
21.5	20.5	31.0	28.5	40.5	33.0
22.0	21.0	31.5	29.0	41.0	33.0
22.5	21.0	32.0	29.0	41.5	33.0

23.0	21.5	32.5	29.0	42.0	33.0
24.0	23.0	33.5	29.5	43.0	33.5
24.5	23.5	34.0	30.0	43.5	33.5

Provided however, that clause (b) shall not apply when the difference between the wet bulb temperature as indicated by the hygrometer in the department concerned and the wet bulb temperature taken with a hygrometer outside in the shade is less than [2] [Substituted by W. B. Factories (Amendment) Rules, 1991] degrees.

## 21. Provision of hygrometer

- In all departments of cotton spinning and weaving mills wherein artificial humidification is adopted, hygrometer shall be provided and maintained in such positions as are approved by the Inspector. The number of hygrometer shall be regulated according to the following scale:- (a) Weaving department. - One hygrometer for department with less than 500 looms, and one additional hygrometer for every 500 or parts of 500 looms, in excess of 500. (b) Other departments - One hygrometer for each room of less than [8500] [Inserted by W. B. Factories (Amendment) Rules, 1991, dated 27.11.1991] cubic meters capacity and one extra hygrometer for each [5670] [Inserted by W. B. Factories (Amendment) Rules, 1991, dated 27.11.1991] cubic meters or part thereof, in excess of this. (c) One additional hygrometer shall be provided and maintained outside each cotton spinning and weaving factory wherein artificial humidification is adopted, and in position approved by the inspector, for taking hygrometer shade reading.

## 22. Exemption from maintenance of hygrometer.

- Where the Inspector is satisfied that the limits of humidity allowed by the Schedule to rule 20 are never exceeded, he may for any department other than the weaving department, grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing.

## 23. Copy of schedule to rule 20 to be affixed near every hygrometer.

- A legible copy of the Schedule annexed to rule 20 shall be affixed near each hygrometer.

## 24. Temperature to be recorded at each hygrometer.

- At each hygrometer maintained in accordance with rule 21, correct wet and dry bulb temperatures shall be recorded thrice daily during each working day by competent person nominated by the Manager and approved by the Inspector. The temperature shall be taken between 7 a.m. and 9 a.m., between 11 a.m. and 2 p.m. (but not in the rest interval) and between 4 p.m. and 5-30 p.m. In exceptional circumstances, such additional readings and between such hours, as the Inspector may specify, shall be taken. The temperature shall be entered in a Humidity Register as nearly as possible in Form No.5., maintained in the factory. At the end of each month, the persons who have taken the readings shall sign the Register and certify the correctness of the entries. The register shall be maintained with up-to-date entries and kept available to the Inspector for examination at all hours

during working of the factory.

## **25. Specification of hygrometer.**

(1) Each hygrometer shall comprise two mercurial thermometer of wet bulb and dry bulb of similar construction, and equal in dimension, scale and divisions of scale. They shall be mounted on a frame with a suitable reservoir containing water. (2) The wet bulb shall be closely covered with a single layer of muslin, kept wet by means of a wick attached to it and dipping into the water in the reservoir. The muslin covering and the wick shall be suitable for the purpose, clean and free from size or grease. (3) No part of the wet bulb shall be within 7.6 centimetre of the dry bulb or less than 2.5 centimetres from the surface of the water in the reservoir and the water reservoir shall be below it, on the side of it away from the dry bulb. (4) The bulb shall be spherical and of suitable dimensions and shall be freely exposed on all sides to the air of the room. (5) The bores of the stems shall be such that the position of the top of the mercury column shall be readily distinguishable at a distance of 60 Centimetres. (6) Each thermometer shall be graduated so that accurate readings may be taken between 10 and 50 degrees [in the centigrade scale.] [Inserted by W. B. Factories (Amendment) Rules, 1991, dated 27.11.1991] (7) Every degree from 10 degrees up to 50 degrees shall be clearly marked by horizontal lines on the stem, each fifth and tenth degrees shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree, i.e., 10, 20, 30, 40 and 50. (8) The markings as above shall be accurate, that is to say, at no temperature between 10 and 50 degrees shall the indicated readings be in error by more than two-tenths of a degree. (9) A distinctive number shall be indelibly marked upon the thermometer. (10) The accuracy of each thermometer shall be certified by the [\* \* \* \*] [Omitted vide Notification No. 340 L.W./L.W./L.W./IR-4/85 dated 2nd April, 1986] National Instruments Factory, Calcutta, or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

## **26. Thermometers to be maintained in efficient order.**

- (12) Each thermometer shall be maintained at all times during the period of employment in efficient working order so as to give accurate indications and in particular (a) the wick and the muslin covering of the wet bulb shall be renewed once a week; (b) the reservoir shall be filled with water which shall be completely renewed once a day. The Chief Inspector may direct the use to distilled water or pure rain water in any particular mill or mills in certain localities; (c) no water shall be applied directly to the wick or covering during the period of employment.

## **27. An inaccurate thermometer not to be used without fresh certificate.**

- If an Inspector gives notice in writing that thermometer is not accurate it shall not, after one month from the date of such notice, be deemed to be accurate unless and until it has been re-examined as prescribed and a fresh certificate obtained which certificate shall be kept attached to the Humidity Register.

## **28. Hygrometer not to be affixed to wall, etc., unless protected by wood.**

(1)[ No hygrometer shall be fixed to a wall, pillar or other surface unless protected therefrom by wood or other heat non-conducting material of at least 13mm thickness placed at a distance of at least 25 mm from the bulb of each thermometer.] [Substituted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991](2)No hygrometer shall be fixed at a height of more than 1.7 meters from the floor to the top of thermometer stem or in the direct draughts from a fan. window or ventilating opening.

## **29. No reading to be taken within 15 minutes of renewal of water**

- No reading shall be taken for record on any hygrometer within 15 minutes of the renewal of water in reservoir.

## **30. How to introduce steam for humidification.**

In any room in which steam pipes are used for the introduction of steam for the purpose of artificial humidification of the air the following provisions shall apply-(a)The diameter of such pipes shall not exceed [50 mm] [Substituted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991] and in the case of pipes installed after day of January 1940 the diameter shall not exceed [25 mm.] [Substituted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991](b)Such pipes shall be as short as is reasonably practicable.(c)All hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than 13 mm. in thickness.(d)No uncovered jet from such pipe shall project more than 11 cm. Beyond the outer surface of any cover.(e)The steam pressure shall be as low as practicable and shall not exceed [5] [Substituted by W. B. Factories Amendment Rules, 1991,] kilogram per square centimeter.(f)[ The steam pipe line used for the introduction of steam into the air in a department shall be effectively covered with the heat insulating material, as may be approved by the Inspector in order to minimize the amount of heat radiation from the steam pipe into the department;] [Substituted by W. B. Factories Amendment Rules, 1991,]Rule 31 to 33 prescribed under sub-section (4) of section 17.

## **31. Lighting of interior parts.**

(1)The general illumination over those interior parts of a factory where persons are regularly employed shall be not less than [65] [Substituted by W. B. Factories Amendment Rules, 1991,] lux measured in the horizontal plane at a level of [90 centimeters] [Substituted by W. B. Factories Amendment Rules, 1991,] above the floor:Provided that in such parts in which the mounting height of the light source for general illumination necessarily exceeds [7.6] [Substituted by W. B. Factories Amendment Rules, 1991,] meters measured from the floor or where the structure of the room or the position or construction of the fixed machinery or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not less than [22] [Substituted by W. B. Factories Amendment Rules, 1991,] lux and where work is actually being done the illumination shall be not less than [65] [Substituted by W. B. Factories Amendment Rules, 1991,] lux.(2)the

illumination over all other interior parts of the factory over which persons employed pass, shall, when and where a person is passing be not less than 5 lux at floor level.(3)The standard specified in this rule shall be without prejudice to the provision of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

### **32. Prevention of glare.**

(1)Where any source of artificial light in the factory is less than [4.9] [Substituted by W. B. Factories Amendment Rules, 1991,] meters above floor level, no part of the light source or of the lighting fitting having a brightness greater than [1.55] [Substituted by W. B. Factories Amendment Rules, 1991,] Candles per sq. c.m. shall be visible to persons whilst normally employed with [30] [Substituted by W. B. Factories Amendment Rules, 1991,] meters of the source, except where the angle of elevation from the eye to the source or part of the fitting, as the case may be, exceeds 20 degrees.(2)Any local Light, that is to say, an artificial light designed to illuminate particularly the area of or part of the area of work of a single operative or small group of operatives working near each other shall be provided with a suitable shade of opaque material to prevent glare or with other effective means by which the light source is completely screened, from the eyes of every persons employed at a normal working place, or shall be so place that no such person is exposed to glare therefrom.

### **33. Power of Chief Inspector to exempt.**

- Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any description of workroom or process that any requirement of rules 31 and 32 is inappropriate or is not reasonably practicable, he may by order in writing exempt the factory or part thereof, or description of workroom or process from such requirement to such extend and subject to such conditions as he may specify.Rule 34 and 35 prescribed under sub-section (4) of section 18.

### **34. Provision for drinking water.**

(1)In every factory there shall be provided and maintained at suitable points conveniently accessible to all workers a supply of water fit for drinking.The quantity supplied daily shall consist of at least [5] [Substituted by W. B. Factories Amendment Rules, 1991,] liters for every worker.(2)The supply of drinking water required under sub-rule (1), if not laid on, shall be contained in suitable vessels and shall be renewed at least daily. All practicable steps shall be taken to preserve the water and vessels from contamination.(3)Any open well or reservoir from which drinking water is derived shall be so situated and protected as not to be liable to pollution by organic matter or other impurities.(4)The area around any place where drinking water is supplied to the workers shall be maintained in clean and drained condition.(5)The Inspector may, by order in writing, require the manager of a factory to obtain a report from the Public Health Engineering Directorate, West Bengal, as to whether the drinking water supplied to the workers is fit for drinking or otherwise.



### 35. Cooling of water

- In every factory wherein more than two hundred and fifty workers are ordinarily employed-(a)the drinking water supplied to the workers shall, from the 1st of April to the 30th of September in every year, be cooled by ice or other effective method :Provided that if ice is placed in the drinking water, the ice shall be clean and wholesome :(b)the cooled drinking water shall be supplied in every canteen, lunch room and rest-room and also at conveniently accessible points throughout the factory which for the purpose of [this rule] [Substituted by W. B. Factories Amendment Rules, 1991,] shall be called "Water Centers";(c)[ the water centers shall be sheltered from the weather. adequately drained] [Substituted by W. B. Factories Amendment Rules, 1991,] [and] [Substituted by W. B. Factories Amendment Rules, 1991] maintained in a clean and orderly condition.(d)The number of water centers to be provided shall be one "centre" for every 100 persons employed at any one time in the factory: Provided that in the case of a factory where the number of persons employed exceeds 500 it shall be sufficient if there is one such "centre" as aforesaid for every 100 persons up to the first 500 and one for every 200 persons above that :-[Provided further that the distance between the place of work of any worker shall not be more than 50 metres from the nearest water center or any distance as may be approved by the Inspector in writing;] [Inserted by W. B. Factories Amendment Rules, 1991.](e)[ the means of supply of cooled drinking water shall be either directly through taps connected to water-coolers or any other system for cooling of water, or by means of vessels, receptacles or tanks fitted with taps and having dust proof covers and placed on raised stands or platforms in shade, and having suitable arrangement of drainage to carry away the spilt water. Such vessels, receptacles or tanks shall be kept clean and the water renewed at least once every day.] [Inserted by W. B. Factories Amendment Rules, 1991.]Rule 36 to 43 prescribed under sub-section (3) of section 19.

### 36. Latrine accommodation

(1)Latrine accommodation shall be provided in every factory on the following scale-(a)Where females are employed, there shall be at least one latrine for every 25 females;(b)Where males are employed, there shall be at least one latrine for every 25 males; provided that, where the number of males employed exceeds 100, it shall be sufficient if there is one latrine for every 25 males up to first 100, and one for every 50 above that.In calculating the number of latrines required under this rule any odd number of workers less than 25 or 50 as the case may be shall be reckoned as 25 or 50.The number of workers in a factory for whom septic tank latrine accommodation shall be deemed to be adequate shall be (a) the maximum number of daily users as approved by [Public Health Engineering Directorate] [Substituted by Notification No. 340 L.W./L.W/ IR-4/85 dated 2nd April 1986. ], West Bengal, under clause (1) of rule 38, or (b) the number of workers provided for on the scale specified in sub-rule (1) whichever is less; and where the number so calculated is less than the total number of workers employed accommodation provided by way of septic tank latrines shall not be deemed to be sufficient within the meaning of section 19.

### 37. Design, situation, etc., of latrines.

- The following provisions shall apply to all latrines : (1) The design and the site or situation shall be subject to the approval of the [Public Health Engineering Directorate] [Substituted by Notification No. 340 L.W./L.W/ IR-4/85 dated 2nd April 1986.], West Bengal, and the construction shall be subject to the approval of the Chief Inspector. Application for such approval shall be accompanied by plans in duplicate, showing-(a) the site or situation and immediate surrounding including adjacent buildings and drinking water sources, and (b) the plan, elevation and necessary cross-sections drawn to scale indicating all relevant details. (2) They shall be situated, unless otherwise approved in writing by the Inspector, within the factory precincts and so located that -(a) every worker may have ready access thereto, and (b) no effluvia therefrom can arise within a workroom. (3) They shall not communicate with any workroom except through the open air or through an intervening ventilated space and shall be adequately lighted during working hours. (4) They shall be under cover and so partitioned off as to secure privacy, and shall have proper hinged doors and fastenings: Provided that the Chief Inspector may by order in writing exempt factories existing on the date of commencement of these rules from providing hinged doors and fastenings for those latrines which have been constructed before such commencement. (5) Where workers of both sexes are employed, separate latrines shall be provided for each sex and outside each latrine, at the entrance, there shall be displayed in a conspicuous position. an approved sign or a notice in Hindi or in Devnagri script and Bengali clearly indicating the sex for which the latrine is provided. All latrines intended for females shall be so placed or so screened that the interior shall not be visible even when the door is open, from any place where persons of other sex have to work or pass, and, if the latrines for one sex adjoin those for the other sex the approaches shall be separate and there shall be no common entrance. (6) Where piped water-supply is available a sufficient number of water taps conveniently accessible, shall be provided in or near such latrine accommodation. (7) [ if piped water supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines;] [Inserted by W. B. Factories Amendment Rules, 1991]

### 38. Septic Tank Latrines.

- The following provisions shall apply to septic tank latrines : (1) The maximum number of daily users for whom the tank is designed shall be approved by the [Public Health Engineering Directorate] [Substituted by Notification No. 340 L.W. /L.W./IR-4185 dated 2nd April 1986], West Bengal, and a notice board showing such number shall be fixed in a prominent position on each latrine. Septic tanks constructed after commencement of this rule shall be so designed as to allow a space of [57 to 85 cubic centimeter] [Substituted by ibid.] per user. The ordinary filter beds shall have [170 cubic centimeter] [Substituted by ibid.] of filtering media per every user and for rotary filters the capacity may reduced to 0.085 centimeter per user. (2) An efficient automatic recording turnstile or turnstiles shall be provided for recording the total number of users admitted on any day, and a register showing the number of daily users shall be maintained. (3) The effluent or the reform shall conform to such standards as the State Government may prescribe by notification in the Official Gazette. The septic tanks and filter beds shall be dislodged at least once a year. (4) For the satisfactory disposal of the sludge or other solid matters, a pit of cubical capacity equal to the total flow of not less than an hour shall be provided to receive the solid matter. When the pit becomes full, the valves shall be

closed and solid matter and sludge shall be allowed time to settle. The effluent shall then be drawn off and sterilized, and the solid matter and sludge shall be trenched or burnt: Provided that where the Inspector is satisfied that in respect of any septic tank, the requirements of clause (2) are not necessary, he may, by order in writing, grant exemption from that clause on such conditions, if any, as he may impose.

### **39. Reference to municipal and local authorities.**

- In the case of factories situated in places within the limit of a local authority if it appears to the Inspector that there has been a breach of the provisions of any municipal or local Act relating to sanitary arrangements, removal of objectionable rubbish, the cleaning and fencing of water tanks, or the like matters, the Inspector shall without prejudice to any action which he is empowered to take under the Act or the ruled thereunder, draw the attention of the local authority to the breach of such provisions.

### **40. Urinal accommodations**

- Urinal accommodation shall be provided for the use of male workers and shall not be less than [60] [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986] centimeters in length for every 50 males, provided that where the number of males employed exceeds 500, it shall be sufficient if there is only one urinal for every 50 males up to the first 500 employed, and one for every 100 thereafter. In calculating the urinal accommodation required under this rule any odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100.

### **41. Urinals to conform to public health requirements**

Urinals other than those connected with an efficient water borne sewage system and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply" with the requirements of the [Public Heather Engineering Directorate] [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986].

### **42. White-washing, colour-washing of latrines and urinals.**

The walls, ceilings and partitions of every latrine and urinal shall be white-washed or colour washed and the white-washing or colour washing shall be repeated at least once in every period of four months. The dates on which the white-washing or colour-washing is carried out shall be entered in the prescribed Register (Form No.6):[\*\*\*] [Omitted by ibid.]

### **43. Construction and maintenance of drains.**

- All drains carrying waste or sullage water shall be constructed in masonry or other impervious material and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line: Provided that, where there is no such drainage line, the effluent shall be

deodorized and rendered innocuous and then disposed of in a suitable manner to the satisfaction of the Inspector. Rules 44 to 46 prescribed under sub-section (2) of section 20.

#### **44. Number and location of spittoons.**

- The number and location of spittoons to be provided shall be to the satisfaction of the Inspector.

#### **45. Type of spittoons.**

- The spittoons shall be of either of the following types : (a) a galvanized iron container with a conical funnel-shaped cover. A layer of suitable disinfectant liquid shall always be maintained in the container; (b) a container filled with dry, clean sand, and covered with a layer of bleaching power; (c) any other type approved by the Chief Inspector.

#### **46. Cleaning of spittoons.**

- [The spittoons mentioned in clause (a) of rule 45] [Substituted by *ibid.* West Bengal Factories Amendment Rules, 1991.] shall be emptied, cleaned and disinfected at least once every day : and the spittoons mentioned in clause (b) of rule 45 shall be cleaned by scraping out the top layer of sand as often as necessary or at least once every day.

### **Chapter IV Safety**

Safety precautions prescribed under subsection (2) of section 21.

#### **47. Safety precautions**

- Without prejudice to the provisions of sub-section (1) of section 21 in regard to the fencing of machines, the further precautions specified in the schedule annexure hereto shall apply to the machines noted in each schedule.

**I**

[Jute Textile and Jute Textile Products] [Substituted by Notification No. 340 L.W. /L.W./IR-4/85 dated 2nd April 1986]

**1. Fencing of machinery. - Fencings, guards or safety devices in respect of each individual machine as prescribed shall be provided and maintained in good order.**

**2. Softening machines. - (a) A safety stopping device comprising a breast plate in front of the feed table to operate the belt striking gear by releasing an unbalanced weight.**

No device departing from the unbalanced weight principle will be deemed to conform to this rule unless it has been approved in writing by the inspector. In the case of machines provided with an individual electric drive the device shall be arranged to act on a switch inserted in the no-volt release circuit. (b) The feed table shall not be less than 1.83 meters in length, measured from the centre of the first cloth to the centre of the first pair of cast iron rollers. The table shall be provided with side guards reaching a height of not less than 1.37 meters from the floor, and extending at that height, not less than 1.07 meters from the centre of the first pair of rollers: the height of the rest of the side guards shall not be less than 1.22 meters from the floor. (c) The starting and stopping gear shall be arranged to comply with the following: - (i) Provision for stopping the machine at both the feed and delivery end. (ii) Provision for starting the machine at the feed end only, the design shall be such that an operator at the feed end cannot start the machine without the co-operation of an operator at the delivery end. (iii) [Working for cleaning a jam or attention otherwise shall not be undertaken unless the supply of power to the machine is cut off and the machine is completely brought to rest by braking or otherwise."] [Inserted by W. B. Factories (Amendment) Rules, 1991.] (iiiA) [The level balancing the unbalanced weight shall be securely fenced.] [Existing Substituted Clause (iii) renumbered as clause (iiiA), by West Bengal Factories (Amendment) Rules, 1991.] (d) Sheet steel casting completely enclosing the side shafts, i.e the shafts and gears shall not be exposed on the underside. The castings shall be locked or secured by a device which will ensure (i) that they cannot be opened while the machines is in motion and (ii) that it will not be possible to start the machine unless they are closed.

**3. Carding machines. - (a) The underframe shall be guarded in such a manner that it will not be possible for operatives to obtain access underneath the machine until the cylinder has ceased to revolve. The lowest cross member of the frame shall come down to a point not more than 25.4 cm from the floor and all openings above this, large enough to permit of access underneath, shall be filled in with sheet steel or fitted with bars or rods spaced not more than 15.24cm apart, and part of this protection may be in the form of a door, but all such doors shall be controlled by a device which will ensure that they cannot be opened until the cylinder has come to rest that the Machine cannot be restarted until the doors are closed.**

Provided that in the case of machines installed before 1st January, 1950, rigidly secured panels filling the under-frame will be deemed to comply with it. (b) A guard with panels and sliding doors of sheet steel or closely, spaced bars or rods enclosing the side gears; there shall be no opening at the underside of this protection for access to the gears. The sliding doors shall be controlled by a device which will ensure that they cannot be opened until the cylinder has come to rest, and that the machine cannot be started up until the doors are closed. (c) A sheet steel guard extending upto the

centre line of the cylinder, enclosing the steeper belts and pulleys shall be provided on all machines installed after 1st January, 1950.(d)An adequately strong and rigid set of bars or rods over the doffer, roller, securely bolted in position. This guard must follow the radius of the roller, the space between the rods not to exceed 5.08 cm; the distance from the doffer pin point to the underside of the rods to be 10.16cm : the space between the Drawing pressing roller underside of the rod not to exceed 5.08 cm' and the width of the guard from the first to last rod to be not less than 30.5 cm.(e)A hand or guard rail extending the full width of the Drawing pressing roller, fitter in a convenient position in front of and higher than the roller.(f)Effective side guards to prevent operative's fingers being caught between the delivery roller and the pressing ball.(g)[ Work for cleaning a jam or attention otherwise shall not be undertaken unless the supply of power to the machine is cut-off and the machine is completely brought to rest by braking of otherwise.] [Inserted by W. B. Factories (Amendment) Rules, 1991,](h)[ [Existing sub Paragraph (g) re-numbering as paragraph (h) by (Amendment) Rule, 1991] When a machine is stopped for clearing a jam or attention otherwise, the starting gear shall be secured in the "off" position atleast by a lock operated by a removable key in possession of the person attending the machine.

**4. Drawing Machine - (a) A sheet steel guard completely closing the space between the bend rail and the bottom of the retaining roller, the opening and closing of which shall be controlled by the starting gear, and the design such that the guard cannot be opened while the machine is running. The guard plate shall swivel more or less about the centre of its height, and the top edge shall swing inwards towards the gill bars as guard opens, and outwards as the guard closes :**

Provided that in the case of machines installed before 1st January, 1950, a fixed guard will be sufficient if the clearance between the top of the guard and the underside of the retaining roller does not exceed 9.5 mm:Provided further that in the case of machines with individual electric drive it will be sufficient if the guard is of the swivelling type and interlinked with the driving mechanism so that silver cannot be fed into the gills, or the guard opened, before the machine is stopped, and that the machine cannot be started up unless the guard is closed.(b)Sheet steel or cast iron guards completely enclosing the end gears, is possible only by removing the guard in its entirety. If doors or movable panels are provided they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part can ne opened whilst the machine is in motion;Provided that in the case of machines installed before 1st January, 1950, a guard securely held in position by automatic catches to prevent opening by vibration but without the interlocking arrangement will be deemed to comply with it.(c)An efficient guard which will prevent operatives' fingers or hands being caught between the delivery roller and the pressing ball.(d)Starting and stopping gear so designed that the machine can be stopped by operatives on the feed and delivery sides; can be started only by an operative on the feed side but with the co-operation of the operative on the delivery side and cannot be started by an operative on the delivery side. The device necessitating co-operation shall be engaged before the machine stops.(e)Shear pins driving the individual carriages shall be fitted to the pinion on the main back shaft and not to the pinion on the carriage back shaft.

**5. Roving machine. - (a) Starting and stopping gear designed to embody the following:-**

(i) Provision for stopping the machine on both the feed and delivery sides. (ii) Provision for starting the machine on the delivery side only. (iii) A device on the delivery side which will automatically lock the belt striking gear in the "off" position. This device shall be such that the machine will not stop before the lock is engaged nor start before it is disengaged by a worker on the delivery side. (b) Sheet steel or cast iron guards completely enclosing the end gears, the design to be such that access to the gears is possible only by removing the guards in its entirety. If doors or movable panels are provided, they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part can be opened whilst the machine is in motion: Provided that in the case of machines installed before 15<sup>th</sup> January, 1950, a guard securely held in position by automatic catches to prevent opening by vibration, but without the interlocking arrangement will be deemed to comply with it. (c) Shear pins driving individual carriages shall be fitted to the pinion on the main back shaft and not to the pinion on the carriage back shaft.

**6. Spinning frames - (a) Access between the driving cylinders whilst in motion shall be prevented by providing a door at the pass end, so interconnected with the starting gear that neither side of the frame is or are running:**

Provided that in the case of machines installed before 1<sup>st</sup> January, 1950, hinged and well secured doors will be deemed to comply with it. (b) Sheet steel or cast iron guards completely enclosing the end gear, the design to be such that access to the gears is possible only by removing the guard in its entirety. If doors or movable panels are provided they shall be controlled by a locking device, operated by the starting gear, which will ensure that the machine cannot be started unless the guard is completely closed and that no movable part can be opened whilst the machine is in motion: Provided that in the case of machines installed before 1<sup>st</sup> January, 1950, a guard securely held in position by automatic catches to prevent opening by vibration but without the interlocking arrangement will be deemed to comply with it.

**7. Cop winding machines. - (a) Effective guards covering the driving end gears. Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration.**

(b) Guards covering the spindle driving gears of such designs that it will not be possible to remove them from position whilst the machine is in motion: Provided that in the case of machines installed before 1<sup>st</sup> January, 1950, guards rigidly secured by bolts or screws will be deemed to comply with it.

**8. Roll winding machines. - Effective guards for traverse or other gears and cams. Hinged doors or panels will not be deemed to comply with this rule unless securely held in the closed position by automatic catches to prevent opening by vibration.**

**9. Beaming and machines. - (a) The flywheel shall be of the disc type.**

(b) Cross and side shafts driving the starch rollers shall be enclosed in protecting tubes. (c) A guard securely anchored in position and protecting the nip between the top and bottom starch rollers. It shall have an aperture large enough to pass the yarn through but not the operative's hand. A hinged guard will not be deemed to be in compliance with this rule. (d) A guard protecting the nip between the yarn beam pressing roller and the outer top weight roller, i.e. the top weight roller on the side at which the beam is inserted and removed. (e) The space between any yarn guide roller and its adjacent steam cylinder must be not less than 7.62 cm.

**10. Looms. - (a) Sheet steel for cast iron guards protecting the crank and wiper shaft spur shall be provided.**

(b) The minimum clearance between the sley and the breast beam shall not be less than 5.08 cm. (c) Yarn beams shall be placed on looms by mechanical or other means. Lifting into position by hand alone will not be deemed to comply with this rule.

**11. Cropping machines. - Sheet steel guards protecting the spirals shall be provided.**

**12. Calendering machines. - (a) A strong and rigid guard, securely fixed in position, in front of the nip between the bottom cast roller and the paper roller on top of same. This guard shall be constructed in such a manner that it will be impossible for the fingers of an operative to reach the nip through the aperture in the guard.**

(b) Safety rollers protecting the nip of the upper rollers. These rollers must be made of steel or wrought iron tube, as light as possible, and not more than 6.35 cm in external diameter. The safety roller shall ride on the under roller and be free to lift. It shall be set in such a manner that the peripheral clearance between it and the upper roller and between it and the under roller, when the safety roller is fully raised, will not permit of an operative's fingers reaching the nip. (c) Sheet steel panels shall be fitted on the machine gable to prevent access through same to the large wheel. (d) Lever weights shall be lowered into strong and rigid guards.



**13. Cloth cutting machines. - A guard preventing access to the knife from the front, top or sides shall be provided. On the underside the knife shall be protected up to the maximum limit without interfering with the machine operation.**

**14. Lapping machines. - (a) Provision for starting the machine at the feed end only: the design shall be such that an operator at the feed end cannot start the machine without the co-operation of an operator at the delivery end and that he cannot interfere with device necessitating co-operation.**

(b)A "sight panel" fitted to the feed table in such position that operators on either side of the machine can see through to the other side.(c)The hand wheel on the driving shaft shall be of the disc type and it shall be located at sufficient distance from the machine gable to permit of fencing being constructed between it and the lever mechanism operating the folder.(d)The treadle mechanism shall be such as to allow extraction of the maximum cloth lapped and no worker shall be required to go up on the machine table to force it down.

**15. Sewing machines. - An apron plate shall be fitted in front of the feed chain and the plate shall be without holes or openings except for slots for the jocky pulleys.**

**16. Press pits. - When the press table is level with the floor the clearance between it and the floor shall not be less than 10.16 cm.**

## **II [Schedule II Substituted by Amendment Rules, 1991]**

Textile Machinery-Except Machinery used in Jute Textiles

**1. Application - The requirements of this Schedule shall apply to machinery in factories engaged in the manufacture or processing of textile other than jute textiles. The Schedule shall not apply to machinery in factories engaged exclusively in the manufacture of synthetic fibres.**

**2. Definitions - For the purposes of the Schedule,**

(a)"Calender" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calenders may have two to ten rollers, or bowls. some of which can be heated;(b)"Embossing calender means a calender with two or more rolls.one of which is engraved for producing figure effects of various kinds on a fabric;(c)"Card" means a machine consisting of cylinders of various sizes, and in certain cases flats covered with card clothing and set in relation to

each other so that fibres in staple form may be separated into individual relationship. The speed of the cylinders and their direction of rotation vary. The finished product is delivered as a silver. Cards of different types are: the revolving flat card, the roller and clearer card etc. (d) "Card clothing" means the materials with which the surface of the cylinder, doffer, flats etc. of a card is covered and consists of a thick foundation material made of either textile fabrics through which are pressed many fine closely spaced, specially bent wires, or mounted saw toothed wire; (e) "Comber" means a machine for combing fibres of cotton, wool etc. The essential parts are device for feeding forward a fringe of fibres at regular intervals and an arrangement of combs or pins, which, at the right time, pass through the fringe. All tangled fibres, short fibres, and nips are removed and the long fibres are laid parallel; (f) "Combing machinery" means a general classification of machinery including cumbers, silver lap machines, ribbon lap machines and gill boxes, but excluding cards; (g) "Rotary staple cutter" means a machine consisting of one or more rotary blade(s) used for the purpose of cutting textile fibres into staple lengths; (h) "Rarnett machine" means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk, etc. Essentially, such machines consist of lickering; one or more cylinders, each having a complement worker and stripper rolls and a fancy roll and doffer. The action of such machines is somewhat like that of a wool card, but it is much more severe in that the various rolls are covered with garnett wire instead of card clothing; (i) "Gill box" means a machine used in the worsted system of manufacturing yarns. Its function is to arrange fibres in parallel order. Essentially, it consists of a pair of feed rolls and a series of followers where the followers move at a faster surface speed and perform a combing action; (j) "In -running rolls" means any pair of rolls or drums between which there is a "nip"; (k) "Interlocking arrangement" means a device that prevents the setting in motion of a dangerous part of machine or the machine itself while the guard, cover or door provided to safeguard against danger is open or unlocked, and which will also hold the guard, cover or door closed and locked while the machine or the dangerous part is in motion; (l) "Kier" means a large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached etc.; (m) "Ribbon lapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb: its purpose is to provide a uniform lap in which the fibres having been straightened as much as possible; (n) "Silver Lapper" means a machine or a part of a machine in which a number of parallel card silvers are drafted slightly, laid side by side in a compact sheet, and wound into a cylindrical package; (o) "Loom" means a machine for effecting the interlocking of two series of yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through headless and reeds. The filling is shot across in a shuttle and settled in place by reeds and slays, and the fabric is wound on a cloth beam; (p) "Starch mangle" means a mangle that is used specially for starching cotton goods. It commonly consists of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution; (q) "Water mangle" means a calender having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics; (r) "Mule" means a type of spinning frame having a head stock and a carriage as its two main sections. The head stock is stationary. The carriage is moveable and it carries the spindles which draft and spin the roving into yarn. The carriage extends over the whole width of the machine and moves slowly towards and away from the head stock during the spinning operation; (s) "Nip" is the danger zone between two rolls or drums which by virtue of their positioning and movement create a nipping hazard; (t) "Openers and pickers" mean a general classification of machinery which includes breaker pickers, intermediate pickers, willow machines,

card and picker waste cleaners, thread extractors, willow machines, card and picker waste cleaners, thread extractors, shredding machines, roving waste openers, shoddy, pickers, bale breakers, feeders, vertical openers, lattice cleaners, horizontal cleaners, screen section, calender section rolls, or beaters used for the preparation of stock for further processing;(u)"Paddler" means a trough for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordant or dye bath;(v)"Plating machine" means a machine used to lay cloth into folds of regular length for convenience of subsequent process or use;(w)"Roller printing machine" means a machine consisting of a large central cylinder, or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved colour rollers, (each having a colour trough), a furnisher roller, doctor blades etc. The machine is used for printing fabrics;(x)"Continuous bleaching range" means a machine for bleaching of cloth in rope or open-width form with the following arrangement. The cloth, after wetting out, passes through a squeeze roll into a Saturator containing a solution of caustic soda and then to an enclosed J-Box. A V-shaped arrangement is attached to the front part of the J-box for uniform and rapid saturation of the cloth, with steam before it is packed down in the J-box. The cloth in a single strand rope form, passes over a guide roll down the first arm of the "V" and up the second. Steam is injected into the "V" at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point. The J-box capacity is such that cloth is rapidly saturated with steam at this point. The J-Box capacity is such that cloth will remain hot for a sufficient time to complete the scouring action. It then passes a series of washers with a squeeze roll in between. The cloth then passes through a second set of saturator, J-box, and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can be applied to open-width cloth;(y)"Mercerizing range" means a 3-bowl mangle, a tenter frame, and a number of boxes for washing and scouring. The whole set-up is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide. Stretch it while saturated and washing out most of the caustic before releasing tension.(z)"Sanforzing machine" means a machine consisting of a large steam-heated cylinder and endless, thick, woollen felt blanket which is in close contact with the cylinder for most of its perimeter and an electrically heated shoe which presses the cloth against the blanket while the latter is in a stretched condition as it curves around feed-in-roll ;(aa)"Shearing machine" means a machine used for shearing cloth. Cutting action is provided by a number of steel blades spirally mounted on a roller. The roller rotates in close contact with a fixed ledger blade. There may be from one to six such rollers on a machine.(bb)"Singeing machine" means a machine which comprises of a heated roller, plate or an open gas flame. The cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz or hairness by burning;(cc)"Slasher" means a machine used for applying a size mixture to warp yarns. Essentially, it consists of stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer and a beaming end for winding the yarn on the loom beams;(dd)"Tenter frame" means a machine for drying cloth under tension. It essentially consists of a pair of endless travelling chains fitted with clips of fine pins and carried on tracks. The cloth is firmly held at the selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width;(ee)"Warper" means a machine for preparing and arranging the yarns intended for the warp of a fabric, specifically, a beam warper.

**3. General safety requirements. - (a) Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock or an equivalent positive locking device.**

(b) Stopping and starting handles or other control shall be of such design and so positioned as to prevent the operator's hand or fingers from striking against any moving part or any other part of the machine. (c) All belts, pulleys, gears, chains, sprocket wheels and other dangerous moving parts of machinery which either form part of machinery or are used in association with it, shall be securely guarded.

**4. Openers and pickers. - 5. (a) In all opening or picker machinery, beaters and other dangerous parts shall be securely fenced by suitable guards so as to prevent contact with them. Such guards and doors or covers or opening giving access to any dangerous part of the machinery shall be provided with interlocking arrangement.**

Provided that in the case of doors or covers of openings giving access to any dangerous part, other than beater covers, instead of the interlocking arrangement, such opening may be so fenced by guards which shall prevent access to any such dangerous part and be either kept positively locked in position or fixed in such a manner that it cannot be removed without the use of hand tools. (b) The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation. (c) The lap forming rollers shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as the weighted rack is done. The guard or cover shall be provided with interlocking arrangement; Provided that the foregoing provision shall not apply to the machines equipped with automatic lap forming devices. Provided further that any such machine equipped with an automatic lap forming device shall not be used unless the automatic lap forming device is in efficient working order.

**5. Cards - (a) All cylinder doors shall be secured by an interlocking arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed ;**

Provided that the latter requirement in respect of the automatic locking device shall not apply while stripping or grinding operations are carried out. Provided further that stripping or grinding operations shall be carried out only by specially trained adult male workers, wearing tight fitting clothing, whose names have been recorded in the register, as nearly as possible in Form No.

7. (b) The licker-in shall be guarded so as to prevent access to the dangerous parts. (c) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping or grinding operations without having either to shift the main belt to the fast pulleys of the

machine or to dismantle the interlocking mechanism. Such an arrangement shall be used only for stripping or grinding operations.

**6. Garnett machines. - (a) Garnett lick-ers shall be enclosed.**

(b)Garnett fancy roils shall be enclosed by guards. These shall be installed in a way that keeps worker rolls reasonably accessible for removal or adjustment.(c)The underside of the garnett shall be guarded by a screen mesh or other form of enclosure to prevent access.

**7. Gill Boxes; - (a) The feed end shall be guarded so as to prevent fingers being caught in the pins of the intersecting failers.**

(b)All nips of in-running rolls shall be guarded by suitable nip guards conforming to the following specifications:Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening and in any circumstances, the maximum width of the opening shall not exceed the following:

Distance of opening Form nip	Maximum width-of opening
0 to 38 mm	6 mm
39 to 63 mm	10 mm
64 to 88 mm	13 mm
89 to 140 mm	15 mm
141 to 165 mm	19 mm
166 to 190 mrn	22 mm
191 to 215 mrn	32 mm

**8. Silver and ribbon lappers - The calender drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.**

**9. Speed frame - Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement.**

**10. Spinning mules- Wheels on spinning mule carriage shall be provided with substantial wheel guards, extending to within 6 mm of the rails.**

**11. Wrappers - Swivelved double-bar gates shall be installed on all wrappers operating in excess of 410 metres/min. These gates shall have interlocking arrangement, except for the purpose of inching or jogging; Provided that the top and bottom bars of the gate shall be at least 105 and 53 cm. High respectively from the floor or working platform and the gate shall be located**

**38 mm. From the vertical tangent to the beam head.**

## **12. Slashers. - (a) Cylinder dryers-**

(i) All open nips of in-running rolls shall be guarded by nip guards conforming to the requirements enjoined in sub paragraph (b) of paragraph 7; (ii) When slashers are operated by control levers, such levers shall be connected to a horizontal bar or treadle located not more than 170 cm. Above the floor to control the operation from any point, (iii) Slashers operated by push button control shall have stop and start buttons located at each end of the machine and additional buttons located on both sides of the machine at the size box and the delivery end. If calender rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are equipped with an enclosed dryer as in sub paragraph (b). (b) Enclosed hot air dryer - (i) All open nips of the top squeezing rollers shall be guarded by nip guards conforming to the requirements enjoined in sub paragraph (b) of paragraph 7; (ii) When slashers are operated by control levers, such levers shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point; (iii) Slashers operated by push-buttons control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located on both sides of the machine at intervals spaced not more than 183 cm. or centres.

## **13. Looms - (a) Each loom shall be equipped with suitable guards designed to minimise the danger from flying shuttles.**

(b) Beam weights for tensions in beam shall be of such construction as to prevent it from falling during its adjustment.

## **14. Valves of kiers, tanks and other containers - (a) Each valve controlling the flow of steam, injurious gases or liquid into a kier or any other tank or container into which a person is likely to enter in connection with a proves, operation, maintenance or for any other purpose, shall be provided with a suitable locking arrangement to enable the said person to lock the valve securely in the closed position and retain the key with him before entering the kier, tank or containers.**

(b) Wherever boiling tanks, caustic tanks and any other containers from which liquids which are hot, corrosive or toxic may overflow or splash, are so located that the operator cannot see the contents from the floor or working area emergency shut off valves which can be controlled from a point not subject to danger of overflow or splash shall be provided to prevent danger.

## **15. Shearing machines - All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed 10 mm.**

**16. Continuous bleaching range (cotton and rayon) - The nip of all in-running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.**

**17. Mercerising range (Piece goods) - (a) A stopping device shall be provided at each end at the machine.**

(b)A guard shall be provided at each end of the frame between the in-running chain and the clip opener.(c)A nip guard shall be provided for the in-running rolls of the mangle and washers and the guard shall conform to the requirements enjoined in subparagraph (b) of paragraph 7.

**18. Tenter frames. - (a) A stopping device shall be provided at each end of the machine.**

(b)A guard shall be provided at each end of the machine frame at the in-running chain and clip opener.

**19. Paddlers. - Suitable nip guards conforming to the requirement enjoined in sub-paragraph (b) of paragraph 7 shall be provided to all dangerous in-running rolls.**

**20. Centrifugal extractors. - (a) Each extractor shall be provided with a guard for the basket and the guard shall have interlocking arrangement.**

(b)Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the basket is shut off.

**21. Squeezer or wringer extractor, water mangle, starch mangle, back washer (worsted yarn\_ crabbing machines, and decating machines. All in-running rolls shall be guarded with nip guards conforming to the requirements enjoined in sub-paragraph (b) of paragraph 7.**

**22. Sanforising and palmer machine. - (a) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements enjoined in sub-paragraph (b) of paragraph 7.**

(b)Access from the sides to the nips of in-running rolls shall be securely fenced by suitable side guards.(c)A safety trip rod, cable or wire centre cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder. It shall operate readily whether

pushed or pulled. The safety trip shall not be more than 170 cm. Above the level at which the operator stands and shall be readily accessible.

**23. Rope washers. - (a) Splash guards shall be installed in all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor and the working surface.**

(b) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all rope washers extending the length of the face of the washer. It shall operate readily whether pushed or pulled. This safety trip shall be not more than 170 cm. above the level on which the operator stands and shall be readily accessible.

**24. Laundry washer tumble or shaker. - (a) Each drying tumble, each double cylinder shaker or clothes tumbler. and each washing machine shall be equipped with an interlocking arrangement which shall prevent the power operation of the inside cylinder when the outer door on the case or shell is open. and which shall also prevent the outer door on the case or shell from being opened without shutting off the power and the cylinder coming to a stop. This may not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching machine.**

(b) Each closed barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders or shells while it is being loaded or unloaded.

**25. Printing machine (roller type) - (a) All in-running rolls shall be guarded by nip guards conforming to the requirement enjoined in sub-paragraph (b) of paragraph 7.**

(b) The engraved roller gears and the large crown wheel shall be securely guarded.

**26. Calenders. - The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so constructed that the cloth can be fed into the rolls safely.**

**27. Rotary staple cutters. - The cutter shall be protected by a guard to prevent hands reaching the cutting zone.**



**28. Plaiting machines. - Access to the trap between the knife and card bar shall be prevented by a guard.**

**29. Hand bailing machine - An angle iron handle-stop guard shall be installed at right angle to the frame of the machine. The stop guard shall be so designed and so located as to prevent the handle from travelling beyond the vertical position should the handle slip from the operator's hand when the pawl has been released from the teeth of the take-up gear.**

**30. Flat-work ironer - Each flat-work or collar ironer shall be equipped with safety bar or other guard across the entire front of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of the operator or other person shall stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than 183 cm."**

### **III**

#### **Wood-Working Machinery**

**1. Definition. - For the purpose of the Schedule :-**

Wood-working machine means a machine used for sawing, planning, morticing or moulding wood or cork.

**2. Stopping and starting device - An efficient stopping and starting device shall be provided on every wood working machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine.**

**3. Space around machines. - The space surrounding every wood-working machine in motion shall be kept free from obstruction.**

**4. Floors. - The floor surrounding every wood-working machine in motion shall be maintained in good and level condition, and shall not be allowed to become slippery, and as far as practicable shall be kept free from chips or other loosed material.**

## **5. Circular saws. - Every circular saw shall be fenced as follows:-**

(a) Behind and in direct line with the saw there shall be a riving knife, which shall have a smooth surface, shall be strong, rigid, and easily adjustable, and shall also conform to the following conditions:-(i) The edge of the knife nearer the saw shall be form an arc of a circle having a radius of the largest saw used and it shall extend upward from the bench to a height not less than that reach/6d by the largest wood or timber saw.(ii) The knife shall be maintained as close as practicable to the saw having regard to the nature of the work being done at the time, and at the level of the bench the distance between the front edge if the knife and the teeth of the saw shall not exceed 12mm.(iii) [ For a saw of a diameter] [Schedule Clause (iii) of Paragraph V inserted by West Bengal Factories (Amendment) Rules, 1991] of less than 60 cm. The knife shall extend upwards from the bench table to within 25 mm. of the top of the saw, and for a saw of a diameter 60 cm. Or over shall extend upwards from the bench table to higher of at least 23 cm. Of the top of the saw.](b) The top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the lence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of riving knife to a point as low as practicable at the cutting edge of the saw.(c) The part of the saw below the bench shall be protected by two plates of metal or other suitable material one on each side of the saw; such plates shall not be more than 15 cm. apart, and shall extend from the axis of the saw outwards to a distance of not less than 5.1 cm. beyond the teeth of the saw. Metal plates, if not beaded, shall be of thickness of at least 2.54 mm. Or if beaded be of a thickness of atleast 1.27 mm.

## **6. Push sticks. - Any push stick or other suitable appliance shall be provided for use at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.**

## **7. Band saws. - Every band saw shall be guarded as follows :**

(a) Both sides of the bottom pulley shall be completely encashed by sheet metal or other suitable material.(b) The front of the pulley shall be covered with sheet metal or other suitable material.(c) All portions of the blade shall be enclosed or otherwise securely guarded except the portion of the blade between the top guide.

## **8. Planning machine. - (1) A planning machine (other than a planning machine which is mechanically fed) shall not be used for overhand planning unless it is fitted with a cylindrical cutter block.**

(2) Every planning machine used for overhand planning shall be provided with a "bridge" guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in vertical and horizontal direction.(3) The feed roller of every planning machine used for thicknessing, shall be provided with an efficient guard.

**9. Vertical spindle moulding machines. - (1) The cutter of every vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.**

**10. Chain morticing machines. - The chain of every chain morticing machine shall be provided with a guard which shall enclose the cutters as far as practicable.**

**11. Adjustment and maintenance of guards.- The guards and other appliances required under this Schedule shall be -**

(a)maintained in an efficient state,(b)constantly kept in position while the machinery is in motion, and(c)so adjusted as to enable the work to be done without unnecessary risk.

**12. Exemptions. - Paragraphs 5, 7, 8 and 9 shall not apply to any wood-working machines in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this schedule.**

## **IV**

### **Rubber Mills**

**1. Installation of machines - Mills for breaking down, cracking, granting, mixing, refining and warming rubber or compounds shall be so installed that the top of the front roll is not less than 1.16 metres above the floor or working level:**

Provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar guard shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the rolls.

**2. Safety devices. - (1) Rubber mills shall be equipped with horizontal safety-trip rods or tight wire cables across both front and rear, which will when pushed or pulled, operate instantly to disconnect the power and apply the brakes, or to reverse the rolls.**

(2)Safety-trip rods or tight wire cables on rubber mills shall extend across the entire length of the face of the rolls and shall be located not more than 1.5 metres above the floor or working level.(3)Safety-trip rods and tight wire cable on all rubber mills shall be examined and tested daily in

the presence of the Manager or other responsible person and if any defect is disclosed by such examination and test the mill shall not be used until such defect has been remedied.

## **V**

### **Power Presses**

**1. Definition. - For the purposes of this Schedule power press means a machine used in metal or other industries for banking, raising, drawing and similar process.**

**2. Starting and stopping mechanism. - The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of press or descent of the ram during tool setting, etc.**

**3. Protection of tool and die. - (a) Each press shall be provided with a fixed guard with a ship plate on the underside enclosing the front and sides of tool.**

(b) Each die shall be provided with a fixed, guard surrounding its front and sides, and extending to the back in the form of a tunnel through which the pressed article falls to the rear of the press. (c) The design, constructions and mutual position of the guards referred to in (a) and (b) shall be such as to preclude the possibility of the worker's hand or fingers reaching the danger zone. (d) The machine shall be fed through a small aperture at the bottom of the die guard, but a wider aperture may be permitted for second or subsequent operations if feeding is done through a chute. (e) [Notwithstanding anything contained in clauses (a) and (b), an automatic or an interlocked guard may be used in place of a fixed guard but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defects, the power shall not operated unless the defect of the guard is removed;] [Inserted/Substituted by West Bengal Factories (Amendment) Rules, 1991]

**4. Exemption - If in the case of a machine or operation it is not possible to comply with the provisions of paragraph 3 alternative means of protection as approved by the Inspector shall be provided.**

## **VI [Schedule VI inserted by ibid.]**

### **Shears, Slitters and Guillotine Machines**

## **1. Definitions- For the purpose of this schedule -**

(a)"guillotine" means a machine ordinarily equipped with straight, bevel edged blade operating vertically against a stationary resisting edge and used for cutting metallic or nonmetallic substances;(b)"shears" or "shearing machine" means a machine ordinarily equipped with straight, bevel-edged blade operating vertically against resisting edges, or with rotary, overhapping cutting wheels and used for shearing metals or non-metallic substances;(c)"slitters" or "slitting machine" means a machine ordinarily equipped with circular disc type knives and used for trimming or cutting into metal or non-metallic substances or for slitting them into narrow strips and includes bread or other food slicers equipped with rotary knives of cutting discs.

## **2. Guillotine and shears. - (a) Where practicable, a barrier metal guard of adequate strength shall be provided at the front of knife, fastened to the machine frame and shall be so fixed as to prevent any part of the operator's body to reach the descending blades from above, below or through the barrier guard or from the sides;**

Provided that in case of a machine used in the paper printing and allied industries, where a fixed barrier metal guard is not suitable on account of the height and volume of the material being fed, there shall be provided suitable starting devices which require simultaneous action of both the hands of the operator or an automatic device which will remove both the hands of the operator from the danger zone at every cutting stroke of the blade.(b)At the back end of such machines, an inclined guard shall be provided over which the slit pieces would slide be collected at a safe distance in a manner as to prevent a person at the back of the machine from reaching the descending blade.(c)Power-driven guillotine cutters, except continuous feed trimmers, shall be equipped with:(i)starting devices which require the simultaneous action of both hands to start the cutting stroke and of at least one hand on a control during the complete cutting cycle of the knife; or(ii)an automatic guard which will remove the hands of the operator from the danger zone at every cutting stroke of the blade, used in conjunction with one hand starting devices which require two distance movements of the device to start the cutting stroke and so designed as to return positively to the non-starting position after each complete cycle of the knife.(d)Where two or more workers are employed at the same time on the same power-driven guillotine cutter equipped with two-hand control the device shall be so arranged that each worker shall be required to use both hands simultaneously on the safety trip to start the cutting stroke, and at least one hand on a control to complete the cycle of the knife.(e)Power-driven guillotine cutters, other than continuous trimmer, shall be provided, in addition to the brake or other stopping mechanism, with an emergency device so as to prevent the machine from operating in the event of failure of the brake when the starting mechanism is in the non-starting position.

## **3. Slitting Machines. - (a) Circular disc-type knives on machine for cutting metal the leather, paper, rubber textiles or other non-metallic substances shall, if within reach of operators during operation, provided with guards**

**enclosing the knife edges at all times, as near as practicable to the surface of the material and which may either -**

(i) automatically adjust themselves to the thickness of the material ; or (ii) be fixed or manually adjusted so that the space between the bottom of the guard and the materials shall not exceed 6mm at any time. (b) Portions of blades underneath the tables or benches of slitting machines shall be covered by guards.

**4. Index cutters and vertical papers slitters. - Index cutter and other machines of cutting strip from the edge of books and for similar operation shall be provided with fixed guards, so arrange that the fingers of the operators may not come between the blades and the tables.**

**5. Corner cutters - Corner cutters, used in the manufacture of paper boxes, shall be equipped with-**

(a) suitable guard, fastened to the machines in front of the knives and provided with slots or perforations to afford visibility of the operations ; or (b) other guards equally efficient for the protection of the fingers of the workers.

**6. Band knives. - Band wheels on band knives, and all portions of the blades except the working side between guide and the table on vertical machines, or between the wheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 6 mm. in thickness or of other material of equal strength.**

**7. Exceptions. - If in the case of a machine or operation it is not possible to comply with the provisions of this Schedule alternative means of protection as approved by the Inspector shall be provided.**

## **VII**

**1. Definition. - "Centrifugal machines" include centrifugal extractors, separators and drivers.**

**2. Every part of centrifugal machine shall be - (i) of good design and construction and of adequate strength ;**

(ii) properly maintained ; and (iii) examined thoroughly by a competent person at regular intervals.

**3. Interlocking guard for drum or basket : - (a) The case, housing the rotation drum or basket of every centrifugal machine shall be provided with a strong lid. The design and construction of the cage as well as the lid shall be such that no access is possible to the drum or basket when the lid is closed.**

(b) Every centrifugal machine shall be provided with an efficient interlocking device so as to effectively prevent the lid referred to in sub-paragraph (a) from being opened while the drum or basket is in motion and prevent the drum or basket being set in motion while the lid is the open position.

**4. Braking arrangement. - Every centrifugal machine shall be provided with an effective braking arrangement capable of bringing the drum or basket to rest within a period of time as reasonable practicable, after the power is cut off.**

**5. Operating speed. - No centrifugal machine shall be operated at a speed in excess of the manufacturer's rating which shall be legible stamped at easily visible place both on the inside of the basket and on the outside of the machine casing.**

**6. Exceptions. - Sub-paragraph (b) of paragraph 3, paragraph 4 and paragraph 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.;**

[Rules 48 to 52B prescribed under Section 41 and section 112] [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986]

#### **48. Building and Structures.**

- No building, wall, chimney, bridge, tunnel, road, gallery, stairway, ramp floor, platform staging or other structure, whether of a permanent or temporary character, shall be constructed, situated or maintained in any factory in such a manner as to cause risk of bodily injury.

#### **49. [Examination of eye-sight of certain workers. [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.]**

(1) No person shall be allowed to operate a crane, locomotive, [dumper, dozen, lorry, tractor, etc.] fork-lift truck, or to give a signal to a crane or locomotive operator unless his eye sight and colour vision have been examined and declared fit by a qualified ophthalmologist to work whether with or without the use of corrective glasses. (2) The eye-sight and colour vision of the person as referred to in sub rule (1) shall be re-examined at least once in every period of 12 months up to the age of 45

years and once in every 6 months beyond that age.(3)Any fee payable for an examination of a person under this rule shall be paid by the occupier and shall not be recoverable from that person.(4)The record of examination or re-examination carried out as required under sub-rules (1) and (2) shall be maintained in Form 17A.

## **49A. Railways in factories.**

(1)This rule shall apply to railways in the precincts of a factory which are not subject to the Indian Railways Act, 1980 (9 of 1890) in a factory.(2)Gateways: A gateway through which a railway track passes shall not be used for the general passage of workers into, or out of, a factory.(3)Barriers and Turn Gates: (a) Where building or walls contain doors or gates which open to a railway track a barrier about 1 metre high shall be fixed parallel to and about 60 cm. away from the building or wall outside the opening and extending several feet beyond it at either end, so that any person passing out may become aware of an approaching train when his pace is checked at the barrier.If the traffic on the nearest track is all in one direction, the barrier shall be in the form of an "L" with the end of the short leg abutting on to the wall and the other end opening towards the approaching train.(b)If the distance between wall and track cannot be made to accommodate such a barrier, the barrier or a turn gate shall be placed at the inside of the opening.(c)Where a footway passes close to a building or other obstruction as it approaches a railway track, a barrier or a turn gate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.(4)Crowds: - (a) Workers' pay-windows, first-aid stations and other points where a crowd may collect, shall not be placed near a railway track.(b)At any time of the day when workers are starting or ending work, all railways traffic shall cease for not less than five minutes(5)Locomotives: - (a) No locomotive shall be used in shunting operations unless it is in good working order.(b)Every locomotive and tender shall be provided with efficient brakes, all of which shall be maintained in good working order. Brake-shoes shall be examined at suitably fixed intervals and those that are worn out shall be replaced at once.(c)Water-gauge glasses of every locomotive, whatever is its boiler pressure, shall be protected with substantial glass or metal screens.(d)Suitable steps and hand-holds shall be provided at the corners of the locomotive for the use of shunter.(e)Every locomotive crane shall be provided with lifting and jacking pads at the four corners of the locomotive for assisting in re-rating operations.(f)It shall be clearly indicated on every locomotive crane in English and in a language understood by the majority of the workers in the factory.(6)Wagons: - (a) Every wagon (and passenger coach,if any) shall be provided either with self-acting brakes capable of being applied continuously or with efficient hand brakes which shall be maintained in good working order. The hand brakes shall be capable of being applied by a person on the ground and fitted with a device for retaining them in the applied position.(b)No wagon shall be kept standing within 3 metres of any authorized crossing.(c)No wagon shall be moved with the help of crow bars or pinch bars.(7)Riding on locomotive wagon or other stock : No person shall be permitted to be upon (whether inside or outside) any locomotive, wagon or other rolling stock except where secured foothold and handhold are provided.(8)Attention to brakes and doors: - (a) No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and, where it is on a gradient, without sufficient number of properly constructed scotches placed firmly in position.(b)No train shall be set in motion until the shunting jamadar has satisfied himself that all wagon doors are securely



fastened.(9)Projecting loads and cranes: - (a) If the load on wagon projects beyond its length, a guard or dummy truck shall be used beneath the projection.(b)No loco-crane shall travel without load unless the jib is completely lowered and positioned in line with the track.(c)When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to rest.(10)Loose-shunting :Loose-Shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. A wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose-shunted unless there is attached to it at least another wagon with such brakes. Loose shunting shall not be performed with, or against, a wagon containing passengers, live-stock or explosives.(11)Fly-shunting : - Fly-shunting shall not be permitted on any factory railway.(12)The shunting jamadar: - (a) Every locomotive or wagon in motion in a factory shall be in charge of a properly trained jamadar.(b)Before authorizing a locomotive or wagon to be moved, the shunting jamadar shall satisfy himself that no person is under or in between or in front of the locomotive or wagon.(13)Hand signals: The hand signals used by the shunting jamadar by day and night shall be those prescribed by the shunting rules of railways, working under the Indian Railways Act (9 of 1890).(14)Night work and fog: - (a) In factories where persons work at night, not movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than 10 lux as measured at the horizontal place at the ground level.(b)In no circumstances shall any locomotive or train be moved between sunset and sunrise or at any time when there is fog, unless it carries a white head light and a red rear light.(15)Speed control: - (a) A locomotive or train shall not be permitted to move by speed greater than seven kilometers per hour.(b)A train, locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than 10 metres during the whole of its journey by a shunting jamadar, who shall be provided with signalling flags or lamp and whistle, necessary for calling the attention of the driver(16)Tracks : - (a) The distance (i) between tracks and (ii) between tracks and buildings, blind walls or other structures and (iii) between tracks and materials deposited on the ground shall be respectively not less than-(aa)from center to center of parallel tracks, the overall width of the widest wagon of that guage plus twice width of the door of such a wagon when opened directly outward plus 1 metre:(bb)from a building or structure other than a loading platform to the center of the nearest track, half the overall width of the widest wagon of that gauge, plus the width of its door when opened out-ward, plus 1.5 metres;(cc)from material stacked or deposited alongside the track, on the ground or on a loading platform, to the center of the nearest track, half the overall width of the widest wagon of that gauge, plus half the width of its door when opened directly outward plus 1 meter.(b)Sleepers of a track shall be in level with the ground and at all crossings of track with a road or walkway the surface of the road or walkway shall be in level with the top of the rails.(c)All track ends shall be equipped with buffer stops of adequate strength.(d)Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a building or in a wall which conceals an approaching train from view, between the building and the track as prescribed in clause (a) of sub-rule (3).(e)Where tracks are carried on gantry or other elevation, a safe footway or footways with hand rails and toe-boards shall be provided at all positions where persons works or pass on foot, and where there is an opening in the stage of an elevated track for the dropping of material to a lower level, the position shall be adequately fenced or the opening itself provided with grill through which a person cannot fall.(f)All point levers shall have their movements parallel, to

and not across, the direction of the track.(g)All loading platforms which are more than 60 cm. above the level of the ground on which the track is laid and more than 15 metres in length, shall be provided with steps at intervals not greater than 15 metres apart to enable the platform to be easily mounted from the track.(h)Turn table on plant railways shall be provided with locking devices which will prevent the tables from turning while locomotives or wagons are being run on or off the tables.(i)Workers shall be prohibited from passing under, between or above railway wagons.(17)Crossing: - (a) At all crossings of a track with a road or walkway, danger or crossing signs and wherever reasonably practicable, blinking light or alarm lights shall be provided. Swinging gates and barriers shall be secured against inadvertent opening or closing.(b)All crossing warning signs, gates and barriers shall be illuminated during hours of darkness.(18)Duties of drivers and shunters:It shall be the duty of every driver of a locomotive, or a shunter including a shunting jamadar to report without delay to their superior any defect in permanent way, locomotive or rolling stock.(19)Young persons not to be employed as drivers of locomotive or as shunters: No person who is under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as a driver of a locomotive or as a shunter.(20)The Chief Inspector may by an order in writing exempt a factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as he deems necessary.]

#### **49B. [ Ovens and driers. [Inserted by West Bengal Factories (Amendment) Rules, 1991.]**

(1)Application - This rule shall apply to ovens and driers, except those used in laboratories or kitchens of any establishment and those which have a capacity below 325 litres.(2)Definition. - For the purpose of this rule, oven drier means any enclosed structure. receptacle, compartment or box which is used for baking, drying or otherwise processing of any article or substance at a temperature higher than the ambient temperature or the air in the room or space in which the oven or drier is situated, and in which a flammable or explosive mixture of air and a flammable or explosive mixture of air and a flammable substance is likely to be evolved within the enclosed structure, receptacle, compartment or box or part thereof on account of the article or substance which is baked, dried or otherwise processed within it.(3)Separate electrical connection. - Electrical power supplied to every oven or drier shall be by means of a separate circuit provided with an isolation switch.(4)Design, construction, examination and testing. - (a) Every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength, free from any patent defects and safe if properly used.(b)No oven or drier shall be taken into use in a factory for the first time unless a competent person has thoroughly examined all its parts and carried out the tests as are required to establish that the necessary safe systems and controls provided for safety in operation for the processes for which it is to be used and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for examination by an Inspector at all times during working of the factory.(c)All parts of an oven or drier which has undergone any alteration or repair which has the effect of modifying any of the design characteristics, shall not be used unless a thorough examination and test as have been mentioned in clause (b) has been carried out by a competent person and a certificate of such examination and test signed by that competent person has been obtained and is kept available for examination by an Inspector at all times during working of the factory.(5)Safety ventilation. - (a) Every oven or drier

shall be provided with positive and effective safety ventilation system using one or more motor-driven centrifugal fans so as to dilute, any mixture of air and any flammable substance that may be formed within the oven or drier and maintain the concentration of the flammable substance in the air a safe level of dilution.(b)The safe level of dilution referred to in clause (a) shall be such as to achieve a concentration of the concerned flammable substance in air of not more than 25 per cents of its lower explosive limit. Provided that a level of concentration in air upto 50 per cent of the lower explosive limit of the concerned flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which(i)shows continuously the concentration of the flammable substance in the air present in the oven or drier at any instance.(ii)sounds and alarms when the concentration of the flammable substance in air in any part of the oven or drier reaches a level of 50 per cent of its lower explosive limit; and(iii)shuts down the heating system of the oven or drier automatically when the concentration in air of flammable substance in any part of the oven or drier reaches a level of 60 per cent of its lower explosive limit and is provided to the oven or drier and maintained in efficient working condition.(c)No oven or drier shall be operated without its safety ventilation system working in an efficient manner.(d)No oven or drier shall be operated with a level of dilution more than what is referred to in clause (b) .(e)Exhaust ducts of safety ventilation system shall be so designed and placed as to discharge the mixture of air and flammable substance away from one workroom and not near windows or doors other openings from where the mixture may re-enter the workroom or create a pollution hazard in the neighbouring atmosphere.(f)The fresh air admitted into the oven or drier by means of the safety ventilation system shall be circulated adequately by means of circulating fan or fans through all parts of the oven or drier so as to ensure that there are no locations where the flammable substance can accumulate in the air or become pocketed to any dangerous degree.(g)Throttling dampers in any safety ventilation system shall be so designed by cutting away a portion of the damper or otherwise, that the system may handle at least the minimum ventilation rate required for safety they are set in their maximum throttling position.

**6. Explosion panels. - (a) Every oven or drier having an internal total space of not less than half cubic metre shall be provided with suitably designed explosion panels so as to allow release of the pressure of any possible explosion within the oven or drier through explosion vents. The area of openings to be provided by means of such vents together with the area of openings of any access doors which are provided with suitable arrangements for their release in case of an explosion, shall be not less than 2200 square centimeter for every one cubic metre of volume of the oven or drier. The design of such explosion panels and doors shall be such as to secure their complete release under an internal pressure of 025 kg. per square centimeter.**

(b)The explosion releasing panels shall, as far as practicable, be situated at the room of the oven or drier or at those portions of the walls where persons do not remain in connection with operations of the oven or drier.(7)Interlocking-arrangements. - In each oven or drier, efficient, interlocking

arrangements shall be provided and maintained to ensure that (i) all ventilating fans and circulating fans whose failure may adversely affect the ventilation rate or flow pattern, are in operation before any mechanical conveyor that may be provided for feeding the article or substances to be processed in the oven or drier is put into operation; (ii) failure of any of the ventilating or circulating fans may automatically stop any conveyor as referred to in clause (i) as may be provided, as well as stop the fuel supply by closing the shut off valve and shut off the ignition in the case of gas or oil fired ovens, and in the case of electrical<sup>v</sup> heated ovens switch off the electrical supply to the heaters; (iii) the above said mechanical conveyor is set in operation before the above said shut-off valve can be energized; and (iv) the failure of the above said conveyor may automatically close the above said shut-off valve in the case of ovens and driers heated by gas oil or steam and deactivate the ignition system or cut off the electrical heaters in the case of electrically heated ovens or driers. (8) Automatic prevention. - Every oven or drier heated by oil, gas, steam or electrically shall be provided with an efficient arrangement for automatic prevention consisting of at least three volume changes with fresh air by operation of the safety ventilation fans and the circulating fans (is used) so as to effect purging of the oven or drier of any mixture of air and a flammable substance before the heating system can be activated and before the conveyor can be placed in position. (9) Temperature Control. - Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature within may not exceed a safe upper limit to be decided in respect of the particular processing being carried on. (10) Multistage processes, - Wherever materials are to be processed in ovens or driers in successive operations, suitable arrangement shall be provided to ensure that the operating temperatures necessary for safe operation at each stage are maintained within the design limits. (11) Combustible substance not to drip on electrical heater or burner flames. Effective arrangements shall be provided in every oven or drier to prevent dripping of combustible substances on electric heater or burner flame used for heating. (12) Periodical examination, testing and maintenance. - (a) All parts of every oven and drier shall be properly maintained and thoroughly examined and the various controls as mentioned in this rule and the working of the oven or drier tested at frequent intervals to ensure its safe operation by a responsible person designated by the occupier or manager, who by his experience and knowledge of necessary precautions against risks of explosion, is fit to undertake such works. (b) A register shall be maintained in which the details of the various tests carried out from time to time under clause (a) shall be entered and every entry made shall be signed by the person making the tests. The register shall be kept available for examination by an Inspector at all times during working of the factory. (13) Training of operators. - No person shall be assigned any task connected with operation of any oven or drier unless he has completed 18 years of age and he is properly trained. (14) Polymerising machines. - (a) Printed fabrics shall be thoroughly dried by passing them over drying cans or through hot flue or other equally effective means, before the same is allowed to pass through polymerizing machines. (b) Infrared ray heaters of polymerizing machines shall be cut off while running the prints. (15) Exemption. - Where the Chief Inspector is satisfied that owing to the special conditions or special methods, all or any of the provision of this rule are not necessary for safe operation of all or any class or any oven or drier, he may by an order, in writing, exempt any factory from all or any of the provisions of this rule subject to such condition as may be specified therein. Such order at any time may also be revoked by Chief Inspector at his discretion.]

## **49C. [ Reaction vessels and kettles. [Rule 49C inserted by West Bengal Factories (Amendment) Rules, 1991.]**

(1) This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure being created above the atmospheric pressure due to reaction getting out of control or any other circumstances. (2) In the event of the vessel being heated by electrical means, a suitable thermostatic control device shall be provided to prevent the temperature exceeding the safe limit. (3) Where steam is used for heating purpose in a reaction vessel, it shall be supplied through a suitable pressure reducing valve or any other suitable automatic device to prevent the maximum permissible steam pressure being exceeded, unless the pressure of the steam in the supply line itself cannot exceed the said maximum permissible pressure. (4) A suitable safety valve or rupture disc of adequate size and capacity shall be provided to effectively prevent the pressure being built up in the reaction vessel beyond the safe limit. Effective arrangement shall also be made to ensure that the released gas, fumes, vapours, liquids or dusts, as the case may be, are led away and disposed of through suitable pipes without causing any hazard. Where flammable gas or vapours are likely to be vented out from the vessel, the discharge end shall be provided with a flame arrester. (5) Every reaction vessel shall be provided with a pressure gauge having the appropriate range. (6) In addition to the devices as mentioned in the foregoing provisions, means shall be for automatically stopping the feed into the vessel as soon as process conditions deviate from the normal limits to an extent which may be considered as dangerous. (7) Wherever necessary, an effective system for cooling, flooding or blanketing shall be provided for the purpose of controlling the reaction and process conditions within the safe limits of temperature and pressure. (8) An automatic auditory and visual warning device shall be provided for clear warning whenever process conditions exceed the present limit. This device, wherever possible, shall be integrated with automatic process correction system. (9) A notice pointing out the possible circumstances in which pressure above atmospheric pressure may be built up in the reaction vessel, the dangers involved and the precautions to be taken by operators shall be displayed at a conspicuous place near the vessel.]

## **50. Machinery and Plant.**

No machinery, plant or equipment shall be constructed, situated, operated or maintained in any factory in such a manner as to cause risk of bodily injury.

### **50A. Precautions against electrical hazards.**

(1) In every factory all electric supply lines and apparatus shall be sufficient in size and power for the work they may be required to do, and shall be constructed, situated, protected, worked and maintained in such a manner as to cause no risk of bodily injury: Provided that where automatic mechanism is installed which renders dead any electrical equipment on the occurrence of danger, such mechanism shall be taken into account by the Inspector when considering the adequacy or otherwise of the protection furnished: Provided further that in no case shall the Inspector accept as to objection under any other Act. (2) Every portable hand lamp must be equipped with an insulating

handle and the bulb must be enclosed in a wire cage which must be insulated from the metal parts of the lamp holder.(3)Wherever practicable connection between the flexible cable of the portable apparatus and the supply line shall be made by a properly designed three pin plug and socket, so arranged that wrong insertion will not be possible.(4)The type and the lay out of electrical apparatus to be used, and the method of electrical wiring, in any part of a factory in which any substance likely to induce ignitable or explosive mixture is used or stored, shall be subject to the approval of the Chief Inspector.Explanation: "Apparatus" includes all apparatus,machines and fittings in which conductors are used, or of which they form parts.

## **51. Methods of work:**

- No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.Rule Prescribed under Sections 41 and 112

### **51A. [ Fragile roofs: [Rule 51A inserted by West Bengal Factories (Amendment) Rules, 1991, dt. 27.11.1991.]**

(1)In any factory no person shall be required or allowed to stand, walk or do any work or go for any purpose whatsoever, on a roof or ceiling covered with or constructed of sheets of whatever nature made of any material or materials in respect of which there may be danger of the sheet-breaking due to the weight of a man or otherwise, and no person shall be required or allowed to work or go for any purpose whatsoever, on a sloping roof unless:(a)suitable and sufficient safety devices like ladders, duck ladders. access boards, crawling boards: safety belts: safety nets etc. securely supported and fixed are provided and used:(b)suitable and sufficient parapet wall or railing or any other equally effective device to prevent the person from falling from the sloping roof is provided;(c)a notice in bold letters, in a language understood by the majority of the workers warning that the roof is of fragile materials and is dangerous and that no person should go or work on the roof unless full protective measures have been taken, is displayed at such a prominent place or places, and in such a manner as to attract immediate attention; and(d)a permit to work on the roof has been issued by a responsible person duly authorized for this purpose by the manager.(2)All preparatory work like cutting, trimming, piercing etc. of the sheets or of any other materials or article to be used on a roof shall be carried out only on the ground and not on the roof.]

## **52. Stacking and storing of materials, etc.**

- No materials or equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.

### **52A. [ Protective equipment [Rule 52A Inserted by West Bengal Factories (Amendment) Rules, 1991, dt. 27-11-1991.]**

(1)The Inspector may, having regard to the nature of hazards involved in work and process being carried out, order the occupier or the manager, in writing, to supply to the workers exposed to

particular hazards any personnel protective equipment as may be considered necessary and specified in the order.(2)All personnel protective equipments to be provided to workers as required under any of the provisions of the Act or the rules made thereunder shall have certification by Indian Standard Institution and be maintained in good repair and usable condition.]Rules prescribed under sub-section (1) of section 22 and section 112

### **53. Work on or near machinery in motion.**

- [(1) One or more adult workers shall be appointed for the purpose of sub-section (1) of section 22 of the Act for such examination or operation as referred to in the proviso to sub-section (1) of section 21 of the Act and the name and other particulars of every such workers shall be entered in a register as nearly as possible in Form No.7 which shall be kept up-to-date and readily available, to the Inspector for examination during working hours of the factory.] [Sub-section (1) of Rule 53 Substituted by *ibid.*](2)No worker shall be appointed unless he has been sufficiently trained for such examination or operation and is acquainted with the dangers from moving machinery arising in connection with such work.(3)A workers required to wear tight fitting clothing under sub-section (1) of section 22 shall be provided by the occupier with such clothing which shall consist of at least a pair of closely fitting shorts and a closely fitting half-sleeve shirt or vest. Such clothing shall be returned to the occupier on termination of service or when new clothing is provided.Rules prescribed under sub-section (2) of section 23.

### **54. [ Employment of young persons on dangerous machines [Rule 54 Substituted by *ibid.*]**

- The machines specified in section 28 and 30 of the Act and the following machines shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of sub-section (1) 23 of the Act are complied with:(a)Power presses other than hydraulic presses;(b)Milling machines used in metal trades;(c)Shears, Slitters and Guillotine machine;(d)Wood working machines;(e)Platen Printing machines;(f)Centrifugal machines;]Rule 54A prescribed under Section 28.

### **54A. [ Hoists and Lifts: [Inserted by West Bengal Factories (Amendment) Rules, 1991, dated 27.11.1991.]**

(1)A report of result of every examination, carried out in respect of every hoist and lift shall be completed in the prescribed Form No. 8A within seven days of completion of the work and shall be signed by the competent person making the examination and shall be kept available for perusal by the Inspector at all hours when the factory or any part thereof is working.(2)For the class or description of hoist or lift specified in the first column of the following Schedule, the requirements of Section 28 of the Act specified in the second column of the said Schedule and set opposite to that class or description of hoist or lift shall not apply :]

## Schedule 11

Class or description of hoist or lift.	Requirements which shall not apply.
Hoist or lift mainly used for raising materials for charging blast furnaces or lime kilns. Hoists not connected with mechanical power and which are not used for carrying persons.	Sub-section (1) in so far as it requires a gate at the bottom landing : sub-section (1) (d); and sub-section (1) (e) Sub-section (1) (b) in so far as it requires the Hoisting or the lifting enclosure to be so constructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part; and sub-section (1) (e).]
Rules prescribed under section 29(2) and 112.	

### 55. Lifting machines, chains, ropes and lifting tackles.

(1) No lifting machine and no chain, rope or lifting tackles, except a fibre rope sling, shall be taken in use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination specifying the safe working load or loads and signed by the person making the test and the examination, has been obtained and is kept available for inspection.

(2)(a) Every jib-crane so constructed that the safe working load may be varied by the rising or lowering of the jib, shall have attached thereto either an automatic indicator of safe working loads or an automatic jib angle indicator and a table indicating the safe working loads at corresponding inclinations of the jib or corresponding radii of the load.

(b) A table showing the safe working of every kind and size of chain, rope or lifting tackle in use, and, in the case of multiple sling, the safe working loads at different angles of the legs shall be posted in the store room or place where or in which the chains, ropes or lifting tackles are kept, and in prominent positions on the premises and no rope, chain or lifting tackle not shown in the table shall be used. The foregoing provisions of the paragraph shall not apply in respect of such lifting tackle if the safe working load at different angles of the legs, is plainly marked upon it.

(3) A register as nearly as possible in Form No. 8 shall be maintained containing the following particulars: (i) Name of occupier of factory. (ii) Address of the factory. (iii) Distinguishing number or mark and description sufficient to identify the lifting machine, chain, rope or lifting tackle. (iv) Date when the lifting machine, chain, rope or lifting tackle was first taken into use in the factory. (v) Date and number of the certificate relating to any test and examination made under sub-rule (1) together with the name and address of the person who issued the certificate. (vi) Date of each periodical thorough examination made under clause (a) (iii) of sub-section (1) of section 29 of the Act and by whom it was carried out. (vii) Date of annealing or other heat treatment of the chain and other lifting tackle and by whom it was carried out. (viii) Particulars of any defects affecting the safe working load found at any such thorough examination or after annealing and of the steps taken to remedy such defects. The register shall be kept readily available for inspection.

(4) All chains and lifting tackle, except a rope sling, shall unless they have been subjected to such other heat treatment as may be approved by the Chief Inspector, be effectively annealed under the supervision, of a competent person at the following intervals: (i) All chains, slings, rings, hooks, shackles and swivels



used in connection with molten metal or molten slag or when they are made of half inch bar or smaller, once at least in every six months.(ii)All other chains, rings, hooks, shackles and swivels in general use once at least in every twelve months.Provided that chains and lifting tackle not in frequent use shall, subject to the Chief Inspector's approval, be annealed only when necessary. Particulars of such annealing shall be entered in the register prescribed under sub-rule (3).(5)Nothing in sub-rule (4) shall apply to the following classes of chains and lifting tackle:(i)Chains made of malleable cast iron.(ii)Plate link chains.(iii)Chains, rings, hooks, shackles and swivels made of steel or of any nonferrous metal.(iv)Pitched chains, working on sprocket or pocketed wheels.(v)Rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines.(vi)Hooks and swivels having screw threaded parts or ball-bearing or other case hardened parts.(vii)Socket shackles secured to wire ropes by whitemetal capping.(viii)Bordeaux connections.(ix)Any chain or lifting tackle which has been subjected to the heat treatment known as "normalizing" instead of annealing.Such chain and lifting tackle shall be thoroughly examined by a competent person once at least in every twelve months and particulars entered in the register kept in accordance with sub-rule (3).(6)All lifting machines, chains, ropes and lifting tackle, except a fibre rope or fibre rope sling, which have been lengthened, altered or repaired by welding or otherwise shall before being again taken into use, be adequately tested and re-examined by a competent person and a certificate of such test and examination be obtained.(7)All rails on which a travelling crane moves and every track on which the carriage of a transporter or runway moves, shall be of proper size and adequate strength and have an even running surface and every such rail or track shall be properly laid, adequately supported and properly maintained.(8)No person under 18 years of age and no person who is not sufficiently trained and reliable shall be employed as driver of a lifting machine whether driven by mechanical power or otherwise, or to give signals to a driver.(9)[ Overhead travelling cranes shall be provided with safe access by stairways or fixed ladders from ground or floor to the crane cabs and from the crane cabs to the bridge footwalks.] [Vide Notification No. 1008 L.W., dated 20th August, 1964.](10)Where the regular footwalks or platforms provided on the bridge of overhead travelling cranes do not afford safe support for changing or repairing wheels of end trucks special platforms shall be provided for the purpose at both ends of each day:Provided that this provision shall apply to new factories and also to existing factories in respect of such overhead travelling cranes as are taken into use after this sub-rule comes into force:Provided further that the Chief Inspector may exempt any factory in respect of any particular overhead travelling crane from the operation of any provision of this sub-rule subject to such condition as he may direct in writing.(11)[To provided access to rail tracks of overhead travelling cranes suitable passage-ways of at least 50 cm. width with toe-boards and double handrails 90 cm. high shall be provided along side and clear off the rail tracks so that no moving part of the crane can strike persons on the ways and the passage way shall be at a lower level than the crane track itself. Sage access ladders shall be fixed at suitable intervals to afford access to such passage-ways and from passage-ways to the rail tracks:Provided that this provision shall apply to all factories in respect of such overhead travelling cranes as are taken into use after this sub-rule come into force:Provided further that the Chief Inspector may exempt any factory in respect of any overhead travelling crane from the operation of the provision of this sub-rule subject to such conditions as may be specified in the order in writing.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.][Rule 56 and 56A prescribed under sub-sections (2) & (3) of section 31] [Inserted by the West Bengal Factories (Amendment) Rules, 1991]

## 56. Pressure Vessel and Plant.

(1) In this rule (a) 'Design pressure' means the maximum pressure that a pressure vessel or plant is designed to withstand safely when operating normally; (b) 'Maximum permissible working pressure' is the maximum pressure at which a pressure vessel or plant is permitted to be operated or used under this rule and is determined by the technical requirements of the process; (c) 'Plant' means a system of piping that is connected to a pressure vessel and is used to contain any gas, vapour or liquid under pressure greater than the atmosphere, and includes the pressure vessel; and (d) 'Pressure vessel' means a vessel that may be used for containing, storing, distributing, transferring, distilling, processing or otherwise handling any gas, vapour or liquid under pressure greater than the atmospheric pressure and includes any pipeline, fitting or other equipment attached thereto or used in connection therewith. (2) Nothing in this rule shall apply to—(a) vessels having internal diameter not exceeding 150 mm. and a capacity not exceeding 145 litres; (b) vessels made of ferrous materials having an internal operating pressure not exceeding one kilogram per square centimeter; (c) steam boiler, steam and feed pipes and their fittings coming under the purview of Indian Boilers Act, 1923 (5 of 1923); (d) metal bottles or cylinder or pressure vessels used for storage or transport of compressed gases or liquid or dissolved gases under pressure covered by the Gas Cylinder Rules, 1981 and the Static and Mobile Pressure Vessels (Unfired) Rules, 1981 framed under the Indian Explosives Act, 1884 (4 of 1884); (e) vessels in which internal pressure is due solely to the static head of liquid; (f) vessel with a nominal water capacity not exceeding 500 litres connected in a water-pumping system containing air that is compressed to serve as a cushion; (g) vessels for nuclear energy application; (h) refrigeration plant having a capacity of 3 tons or less of refrigeration in 24 hours; and (i) working cylinders of steam engines or prime movers, feed pump and steam traps, turbine casings, compressor cylinders, steam separators or dryers, steam strainers, steam de-super-heaters, [xxxx] [Omitted by West Bengal Factories (Amendment) Rules, 1991.], air receivers for fire sprinkler installations, air receivers of monotype machines provided the maximum working pressure of the air receiver does not exceed 1.33 kg. Per sq.cm. (20 lbs./sq.in) and the capacity [85] [Substituted by ibid.] litres (3 cu.ft), air receivers of electrical circuit breakers, air receivers or electrical relays, air vessels on pumps, pipe coils, accessories of instruments and appliances, such as cylinders and piston assemblies used for operating relays and interlocking type of guards, vessels with liquids subjected to static head only, and hydraulically operating cylinders other than any cylinder communicating with an air loaded accumulator. (3) Every pressure vessel or plant used in a factory—(a) shall be properly designed on sound engineering practice; (b) shall be of construction, sound material, adequate strength and free from any patent defect; and (c) shall be properly maintained in a safe condition: Provided that the pressure vessel or plant in respect of the design and construction on which there is an Indian standard of the country of manufacture or any other law or regulation force, shall be designed and constructed in accordance with the said standard, law or regulation, as the case may be, and a certificate thereof shall be obtained from a competent person which shall be kept and produced on demand by an Inspector. (4) Every pressure vessel shall be fitted with—(a) a suitable safety valve or other effective pressure relieving device of adequate capacity to ensure that the maximum permissible working pressure of the pressure vessel shall not be exceeded. It shall be set to operate at a pressure not exceeding the maximum permissible working pressure and when more than one protective device is provided, only one of the devices used be set to operate at the maximum permissible working pressure and the additional

device shall be set to discharge at a pressure not more than 5 per cent in excess of the maximum permissible working pressure;(b)a suitable pressure gauge with a dial range not less than 1.5 times the maximum permissible working pressure, easily visible and designed to show at all time the correct internal pressure and marked with a prominent red mark at the maximum permissible working pressure of the pressure vessel;(c)a suitable attachment for fixing a standard test pressure gauge for checking the accuracy of the pressure gauge referred to in clause (b) of this sub-rule;(d)a suitable stop valve or valves by which the pressure vessel may be isolated from other pressure vessels of plant or source of supply of pressure. Such a stop valve or valves shall be located as close to the pressure vessel as possible and shall be easily accessible; and(e)a suitable drain cock or valve at the lowest part of the pressure vessel for the discharge of the liquid or other substances that may collect in the pressure vessel;Provided that it shall be sufficient for the purpose of this sub-rule if the safety valve or pressure device, the pressure gauge and the stop valve are mounted on a pipeline immediately adjacent to the pressure vessel and where there is a range of two or more similar pressure vessels served by the same pressure lead, only one set of such mountings need to be fitted on the pressure lead immediately adjacent to the range of pressure vessels provided they cannot be isolated:Provided further that in case where owing to the nature of the process or the action of the contents of the vessels a pressure gauge or safety valve or both cannot work reliably, a tested and reliable working thermometer with a sufficient large scale, on which shall be clearly marked the maximum permissible temperature in the vessel or pyrometers or rupture discs in addition to the pressure gauge and safety valve may be fitted as may be directed by the Chief Inspector.(5)(a)Every pressure vessel which is designed for a working pressure less than the pressure at the source of supply, or less than the pressure which can be obtained in the pipe connecting the pressure vessel with any other source or supply, shall be fitted with a suitable pressure reducing valve or other suitable automatic device to prevent the maximum permissible working pressure of the pressure vessel being exceeded.(b)To further protect the pressure vessel in the event of failure of the reducing valve or device, at least one suitable safety valve or other pressure, relieving device of adequate capacity sufficient to release of the steam, vapour or gas without undue pressure rise as determined by the pressure at the source of supply and the size of the pipe connecting the source of supply, shall be fitted close to the reducing valve on the low pressure side.(6)(a)No new pressure vessel or plant shall be taken into use in a factory after coming into force of this rule unless it has been hydrostatically tested by a competent person at a pressure at least 1.3 times the design pressure, and no pressure vessel or plant which has been previously used or has remained isolated or idle for a period exceeding 6 months or which has undergone alterations or repairs shall be taken into use in a factory, unless it has been the roughly examined by a competent person externally, and internally, if practicable, and has been hydrostatically tested by the competent person at a pressure which shall be 1.5 times the maximum permissible working pressure;Provided, however, that the pressure vessel or plant Which is so designed and constructed that it cannot be safely filled with water or liquid or is used in service where even traces of water cannot be tolerated, shall be pneumatically tested at pressure not less than the design pressure or the maximum permissible working pressure, as the case may be, subject to the condition that-(i)where the source of pressure is higher than the test pressure. precaution against over-pressurisation of vessel or plant under test shall be taken by the use of suitable reducing valve, pressure gauge and safety valve of adequate size:(ii)steps shall be taken to ensure that people are not likely to be injured in the event of bursting either by containing the vessel under test within a blast pit, or by retaining wall, or by ensuring that such personnel are

adequately protected; and(iii)the vessel under test should not be approached for close inspection until after the test the pressure has been reduced:Provided further that the pressure vessel or plant which is lined with glass shall be tested hydrostatically or pneumatically as required at a pressure not less than the design pressure or maximum permissible working pressure, as the case may be.Explanation- Design pressure shall be not less than the maximum permissible working pressure and shall take into account the possible fluctuation of pressure during actual operation.(b)No pressure vessel or plant shall be used in a factory unless there has been obtained from the maker of the pressure vessel or plant or from a competent person a certificate specifying the design pressure or maximum permissible working pressure thereof, and stating the nature of tests to which the pressure vessel or plant and its fitting (if any) have been subjected, and every pressure vessel or plant so used in a factory shall be conspicuously marked so as to enable it to be identified as to be the pressure vessel or plant to which the certificate relates and the certificate shall be kept available for perusal by the Inspector.(c)No pressure vessel or plant shall be permitted to be operated or used at a pressure higher than its design pressure or maximum permissible working pressure as shown in the certificate.(7)Every pressure vessel or plant in service shall be thoroughly examined by a competent person-(a)externally, once in every period of six months;(b)internally, once in every period of twelve months;Provided that if by reason of the construction of a pressure vessel or plant, a thorough internal examination is not possible, this examination may be replaced by a hydrostatic test which shall be carried out once in every period of two years;(c)hydrostatically tested once in every period of four years:Provided that in respect of a pressure vessel or plant within walls such as sizing cylinder made of copper or any other non-ferrous metal, periodic hydrostatic test may be dispensed with subject to the condition that the requirements laid down in sub-rule (8) are fulfilled:Provided further that when it is impracticable to carry out thorough external examination of any pressure vessel or plant every six months as required in clause (a) of this sub-rule, or if owing to its construction and use the pressure vessel or plant cannot be hydrostatically tested as required in clauses (b) and (c) of this sub-rule, a thorough external examination of the pressure vessel or plant shall be carried out at least once in every period of two years, and at least once in every period of four years a thorough systematic non-destructive test, like ultrasonic test, to detect defects of all parts shall be carried out.(8)(a)In respect of any pressure vessel or plant of thin walls such as sizing cylinder made of copper or any other non-ferrous metal the maximum permissible working pressure shall be reduced at the rate of 5 per cent of the original maximum permissible working pressure for every year of its use after the first five years and no such cylinder shall be allowed to continue to be used for more than twenty years after it was first taken into use.(b)If any information as to the date of construction, thickness of walls, or maximum permissible working pressure is not available, the age of such pressure vessel or plant shall be determined by the competent person in consultation with the Chief Inspector from the other particulars available with the manager.(c)Every new and second hand pressure vessel or plant of thin walls to which repairs likely to effect its strength or safety have been carried out, shall be tested before use to at least 1.5 times its maximum permissible working pressure.(9)(a)A report of the result of every examination or test, carried out, shall be completed in the prescribed Form No.9 within seven days of completion of the work and shall be signed by the person making the examination or test, and shall be kept available for perusal by the Inspector at all hours when the factory or any part thereof is working.(b)If during any examination any doubt arises as to the ability of the pressure vessel or plant to work safely until the next prescribed examination, the competent person shall enter in the prescribed form his observations,

findings and conclusions with other relevant remarks with reasons and may authorise the pressure vessel or plant to be used and kept in operation subject to a lowering of maximum permissible working pressure, or to more frequent or special examination or test, or subject to both of these conditions.(c)The competent persons making report of any examination under this rule, shall within seven days of the completion of the examination, send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced or the examination shows that the pressure vessel or plant or any part thereof cannot continue to be used with safety unless certain repairs are carried out or unless and other safety measure is taken.(d)If a competent person falls to make a thorough examination as required by this rule or makes a report which is false or deficient in any material particular or falls to send to the Inspector a copy of the report as required by clause (C) of this sub-rule, he shall be guilty of an offence.(10)Where the report of any examination under this rule specifies any condition for securing the safe working of any pressure vessel or plant, the pressure vessel or plant shall not be used unless the specified condition is fulfilled.(11)If the Chief Inspector is not satisfied as to the competence of the person employed to make the examination or as to the thoroughness of the examination, he may require the pressure vessel or plant to be re-examined by a person nominated by him by an order in writing.(12)(a)The requirements of this rule shall be in addition to and without any prejudice to and not in derogation of the requirements of any other law in force.(b)Certificates or reports of any examination, or test of any pressure vessel or plant to which sub-rules (7) to (9) do not apply, conducted or required to be conducted under any other law in force and other relevant record relating to such pressure vessel or plant, shall be properly maintained as required under the said law and shall be produced on demand by the Inspector.]

### **56A. [ Water-sealed gasholder. [Inserted by West Bengal Factories (Amendment) Rules, 1991.]**

(1)The expression "gasholder" means a water-sealed gasholder which has a capacity of not less than 141.5 cubic metres.(2)Every gasholder shall be of good construction, sound material, adequate strength, free from patent defect and properly maintained.(3)Where there is more than one gasholder in a factory, every gasholder shall be marked conspicuously with a distinguishing number or letter.(4)Every gasholder shall be thoroughly examined externally by a competent person at least once in a period of every twelve months.(5)In the case of gasholder in use for more that 10 years, the internal condition of the sheeting shall, within year of the coming into force of this rule and thereafter at least once in a every period of four years, be examined by a competent person by means of electronic or other accurate devices.Provided that if the Chief Inspector is satisfied that such electronic or other accurate devices are not available he may permit the cutting of samples from the crown and the sides of the holder at places to be indicated by the competent person.Provided further that if the above examination raises a doubt, an internal visual examination shall be made.

### **6. All possible steps shall be taken, to prevent or minimize ingress of impurities in the gasholder during its operation or maintenance.**

**7. No gasholder shall be repaired or demolished except under the direct supervision of a person who by his training, experience and knowledge of the necessary precautions against risks of explosion, and/or persons being overcome by gas, is competent to supervise such work.**

**8. (a) All sample discs cut under sub-rule (5) shall be kept readily available for inspection, on demand by an Inspector.**

(b) A permanent register in Form 9A duly signed by the occupier or manager shall be maintained, kept up-to-date and made readily available to the Inspector at all times during working of the factory. (c) The results of examinations by the competent person carried out as required under sub-rules (4) and (5) shall be recorded in Form 9B, which shall be kept readily available in the factory for examination by an Inspector at all times during working of the factory;] Rule prescribed under sub-section (2) of Section 34 and Section 112.

## **57. Excessive weights.**

(1) No [worker] [Substituted by. Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.] shall be employed in any factory to lift, carry or move by head, unaided by another person, any material, article, tool or appliance exceeding the maximum limit in weight set out in the following Schedule:[Schedule] [Substituted by. Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.]

Class of worker	Maximum limit
(a) Adult male	55 Kg
(b) Adult female	30 Kg
(c) Adolescent male	30 Kg
(d) Adolescent female	20 Kg
(e) Male child	16 Kg
(f) Female child	14 Kg.]

(2) No [worker] [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.] shall be engaged, in conjunction with others, in lifting, carrying or moving by hand or on head, any material, article, tool or appliance, if the weight thereof exceeds the lowest weight fixed by the Schedule to sub-rule (1) for any of the person engaged, multiplied by the number of the persons engaged;[Provided that in case of transport of round articles by rolling on the floor or transport of articles by means of hand operated wheeled vehicles the maximum weights specified in the Schedule may be increased by fifty per cent in each case for the purposes of sub-rules (1) and (2).] [Vide Notification No. 1008 L.W., dated 20th August 1964.](3) No woman whilst she is pregnant, shall be employed in any factory to lift, carry, or move by hand or on head any material, article, tool or appliance.

## **58. [ Protection of eyes. [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.]**

- Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediate vicinity of the following processes-(a)The process specified in Schedule I annexed hereto, being processes which involve risk of injury to eyes from particles or fragments thrown off in the course of the processes.(b)The processes specified in Schedule II annexed hereto, being process which involve risk of injury to eyes by reason of exposure to excessive light or infra-red or ultra-violet radiations.

**I**

(a)Turning, drilling, breaking, cutting, chipping, grinding, dressing or carving, as the case may be of bricks, stones, slags, concrete, abrasive wheels or other similar materials.(b)Dry grinding of metals applied by hand to a revolving wheel or disc or band driven by mechanical power.(c)Routing, turning, arting, facing, milling, shaping, sawing or other similar operations on metals where work is done dry either by cutting tool or abrasive wheels.(d)Fettling, cutting out cold rivets, bolts, pins, lugs or other similar articles, or chipping, scuffing or desealing of any surface by means of a hammer, chisel punch or similar hand tools.(e)Breaking of metal by means of hammers or other tools driven by mechanical power, or work with drop hammers or other power hammers.(f)Work at a furnace where there is risk to the eyes from molten substances, and pouring, or skimming of molten substances,(g)Sawing, turning, mortising, moulding, planning, thicknessing or similar other operations on wood or other non-metalic substances.(h)Handling or manipulation of acids, corrosive liquids or materials, or part of plant which contains such acids, liquids or materials.

**II**

(a)Welding or cutting of metals by means of electric, oxy-acetylene or similar processes.(b)Work on furnaces, process such as rolling casting or forging of metal or any other process wherein there is a risk of injury to eyes from exposure to excessing light or infra-red or ultra-violet radiations.]Rules prescribed under sub-section (6) of section 36.

## **59. Minimum dimensions of manholes**

- Every chamber, tank, vat, pipe, flue or other confined space, in which persons may have to enter and which may contain dangerous fumes to such an extent as to involve risk of the persons being overcome thereby, shall, unless there is other effective means of egress, be provided with a manhole which may be rectangular, oval or circular in shape, and which shall-(a)in the case of a rectangular or oval shape, be not less than 40.6 cm. long and 30.5 cm. wide;(b)in the case of a circular shape, be not less than 40.6 cm. in diameter.Exemption under sub-section (5) of section 37.

## **60. Exemptions.**

- The requirements of sub-section (4) of section 37 shall not apply to the following processes carried

on in any factory :-(a)The operation of repairing a water-sealed gas-holder by the electric welding process, subject to the following conditions:-(i)The gasholder shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke-over gas, producer gas, blast furnace gas, or gases other than air, used in their manufacture:Provided that this exemption shall not apply to any gasholder containing acetylene or mixture of gases to which acetylene has been added intentionally.(ii)Welding shall only be done by the electric welding process and shall be carried out by experienced operatives under the constant supervision of a competent person.(b)The operation of cutting or welding steel or wrought iron gas mains and services by the application of heat, subject to the following conditions:-(i)the main or service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, coke-oven gas, producer gas, blast furnace gas, or gases other than air, used in their manufacture;(ii)the main or service shall not contain acetylene or any gas or mixture of gases to which acetylene has been added intentionally;(iii)the operation shall be carried out by an experienced person or persons and at least two persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operation;(iv)the site of operation shall be free from any inflammable or explosive gas or vapour;(v)where acetylene gas is used as a source of heat in connection with an operation it shall be compressed and contained in a porous substance in a cylinder; and(vi)prior to the application of any flame to the gas main or service, this shall be pierced or drilled and the escaping gas ignited.(c)The operation of repairing an oil tank on any ship by the electric welding process shall be subject to the following conditions :-(i)The oil contained in the tank shall have a flash point of not less than 65.6°C (close test) and a certificate to this effect shall be obtained from a competent analyst.(ii)The analyst's certificate shall be kept available for inspection by an Inspector, or by any person employed or working on the ship.(iii)The welding operation shall be carried out only on the exterior surface of the tank at a place (a) which is free from oil or oil-leakage in inflammable quantities; and (b) which is not less than 35.5 cm. below the nearest part of the surface of the oil within the tank; and(iv)Welding shall be done only be electric welding and shall be carried out by experienced operatives under the constant supervision of a competent person.[Rules 61 and 62 prescribed under sub-section (3) of section 38 and section 41] [Substituted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991]

## 61. Fire.

(1)Process, equipment, plant, etc., involving serious explosion and serious fire hazards: In every factory-(a)all process [storages, equipments, plants, etc.,] [Inserted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991.] involving serious explosion and flash-fire hazards shall be located in segregated buildings where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time;(b)all industrial processes involving serious fire hazards should be located in buildings or work places separated from one another by walls of fire-resistant construction;(c)all equipment and plant involving serious fire or flash-fire hazards shall, wherever possible, be so constructed and installed that in case of fire they can be easily isolated;(d)all ventilation ducts, pneumatic conveyors and similar equipment involving a serious fire risk shall be provided with flame-arresting or automatic fire extinguishing [appliances, or fire resisting dampers electrically interlocked with heat sensitive/smoke detectors and the air



conditioning plant system; and] [Substituted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991.](e)in all work places having serious fire or flash-fire hazards, passages between machines, installation or piles of material shall be at least 90cm. wide. [For storage piles, the clearance between the ceiling and the top of the pile shall not be less than 2m] [Inserted by W. B. Factories Amendment Rules, 1991, dated 27.11.1991.](2)Access for fire fighting : - (a) Buildings and Plants shall be so laid and roads, passageways, etc., shall be so maintained as to permit unobstructed access for fire fighting.(b)[ Doors and window openings shall be located in suitable positions on all external walls of the buildings to provide easy access to the entire area within every building for fire fighting.] [Inserted By W.B. Factories Amendment Rules, 1991 dated 27.11.1991](3)Protection against lightning : Protection from lightning shall be provided for -(a)a building in which explosive or highly flammable substances are manufactured, used, handled or stored;(b)storage tanks containing oils, paints, or other flammable liquids;(c)grain elevators;[\* \* \*] [Omitted by ibid](d)buildings, tall chimneys or stocks where flammable gases, fume. dust or lint are likely to be present; and(4)[\* \* \*] [Omitted by ibid](5)Precautions against ignition: Wherever there is danger of fire or explosion from accumulation of flammable or explosive substances in air,(a)all electrical apparatus shall either be excluded from the area of risk, or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;(b)effective measures shall be adopted for prevention of accumulation of static charges to dangerous extent;(c)workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;(d)smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;(e)no transmission belts with iron fasteners shall be used; and(f)all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flame, frictional sparks, over-heated surfaces of machinery or plant, chemical or physical chemical reaction and radiant heat.(6)Spontaneous ignition: - (a) Where materials are likely to induce spontaneous ignition care shall, be taken to avoid formation of air pocket and to ensure adequate ventilation.(b)[ Material susceptible to spontaneous ignition shall be stored in dry condition and in heaps .of such capacity and separated by such passage so as to prevent spontaneous ignition; and(c)material susceptible to spontaneous ignition when stored in the open shall be at a distance not less than 10 metres away from process or storage buildings.](7)Cylinders containing compressed gas: - Cylinders containing compressed gas may only be stored in open if they are protected against excessive variation of temperature, direct rays of sun, or continuous dampness. Such cylinders shall never be stored near highly flammable substances, furnaces or hot processes. The form where such cylinders are stored shall have adequate ventilation.(8)Storage of flammable liquids : (a) The quantity of flammable liquids in any work room shall be minimum required for the process or processes carried on in such room. Flammable liquids shall be stored in suitable with close fitting covers :Provided that not more than 20 litres of flammable liquids having a flash point of 210C or less shall be kept or stored in any work room.(b)Flammable liquids shall be stored in closed containers and in limited quantities in well ventilated rooms or Fire resisting construction which are isolated from the remainder of the building by fire walls and self closing fire doors.(c)Large quantities of such liquids shall be stored in adequately ventilated buildings of fire resisting construction or in storage tanks, preferably underground, and these shall be located at a distance from any building as required in the Petroleum Rules, 1976.(d)Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any escaping liquid within safe limits.(9)Accumulation

of flammable dust, gas, fume or vapour in air or flammable waste material on the floors : In every factory -(a)effective steps shall be taken for removal or prevention of the accumulation in the air of flammable dust, gas, fume or vapour to an extent which is likely to be dangerous, and(b)no waste material of a flammable nature shall be permitted to accumulate on the floor and shall be removed at least once in a day or shift, and more often, when possible. and such materials shall be placed in suitable metal containers with covers wherever possible.(10)Fire exits: - (a) In this rule.

-(i)"horizontal exit' means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or an adjoining part of the same building with adequate separation, and(ii)"travel distance" means the distance an occupant has to travel to reach an exit.(b)In every room of a factory, exits sufficient to permit safe escape of the occupants in case of fire or other emergency shall be provided and the same shall be free from any obstruction.(c)[ an exit be a doorway, corridor, passage way to an external stairway segregated from the rest of building by fire resisting walls which shall provide continuous and protected means of egress to the exterior of a building or to an exterior open space. An exit may also include a horizontal exit leading to an adjoining building at the same level.](d)Lifts, escalators and revolving doors shall not be considered as exits for the purpose of this sub-rule.(e)[ The exits shall be clearly visible and sufficiently illuminated with suitable arrangement by such artificial lighting, as is needed to be adopted for this purpose, to maintain the required illumination in case of failure of the normal source of electric supply.] [Substituted by W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991](f)The exits shall be marked in a language understood by the majority of the workers.(g)Fire resisting doors or roller shutters shall be provided at appropriate places along the escape routes to prevent spread of fire and smoke, particularly at the entrance of lift shafts or stairways where funnel or flue effect may be created an upward spread of fire.(h)All exits shall provide continuous means of egress to the exterior of a building or to an exterior open space leading to a street.(i)Exits shall be so located that the travel distance on the floor shall not exceed 30 metres.(j)In case of those factories where materials of high hazard are stored or used, the travel distance to the exit shall not exceed 22.5 metres and there shall be at least two ways of escape from every room however small except toilet rooms, so located that the points of access thereto are out of or suitably shielded from areas of high hazard.(k)Wherever more than one exit is required for any room, space or floor, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served.(l)The unit of exit width, used to measure capacity of any exit, shall be 50 cm. A clear width of 25 cm. shall be counted as an additional half unit. Clear width of less than 25 cm. shall not be counted for exit width.(m)Occupants per unit width shall be 50 for stairs and 75 for doors.(n)For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupants within any floor area or 10 square metres per person, whichever is more.(o)There shall not be less than two exits serving every floor area above and below the ground floor, and at least one of them shall be an internal enclosed stairway. [Iron rung ladders or spiral staircases shall not be acceptable for use as exit staircases.] [Inserted by Amendment Rules, 1991](p)For every building or structure used for storage only, and every section thereof considered separately, shall have access to at least one exit so arranged and located as to provide a suitable and unimpeded means of escape for any person employed therein, and in any such room wherein more than 10 persons may normally present, at least two separate means of exit shall be available, as remote from each other as practicable.(q)Every storage area shall have access to at least one means of exit which can be readily

opened.(r)Every exit doorway shall open into an enclosed stairway, a horizontal exit. on a corridor or passageway providing continuous and protected means [of egress.] [Substituted by W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991](s)No exit doorways shall be less than 100 cm. in width. Doorways shall be not less than 200 cm. in height.(t)Exit doorways shall open outwards, that is away from the room but shall not obstruct the travel along any exit. No door, when opened, shall reduce the required width of stairway of landing to less than 90 centimetres sliding door with up-down movement shall not be installed for this purpose.(u)An exit door shall not open immediately upon a flight of stairs : A landing, at least 1.5m x 1.5m in size shall be provided in the stairway at each doorway. The level of landing shall be the same as that of the floor which it serves.] [Substituted by W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991](v)The exit doorways shall openable from the side which they serve without the use of a key.(w)Exit corridors and passageways shall be of a width not less than the aggregate required width of exit doorways leading from there in the direction of travel to the exterior.(x)Where stairways discharge through corridors and passageways, the height of the corridors and passageways shall not be less than 2.4 metres.(y)[(y) \* \* \*] [Deleted by ibid.](z)[(z) \* \* \*] [Deleted by ibid.](aa)A staircase shall not be arranged around lift shaft unless the latter is totally enclosed by a material having a fire-resistance rating not lower than that of the type of construction of the former.(bb)Hollow combustible construction shall not be permitted.(cc)The minimum width of an internal staircase shall be 100 cm.(dd)The minimum width of treads without nosing shall be 25 cm. for an internal staircase. The treads shall be constructed and maintained in a manner to prevent slipping.(ee)The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight.(ff)Hand rails shall be provided with a minimum height of 100 cm and shall be firmly supported.(gg)The use of spiral staircase shall be limited to low-occupant toad and to a building of height of 9 metres, unless they are connected to platforms such as balconies and terraces to allow escapes to pause. A spiral staircase shall be not less than 300 cm in diameter and have adequate head room.(hh)The width of a horizontal exit shall be same as for the exit doorways.(ii)The horizontal exit shall be equipped with atleast one fire door of self-closing type.(jj)The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor areas served allowing not less than 0.3 square metre per person. The refuge area shall be provided with exits adequate to meet the requirements of this sub-rule. At least one of the exits shall lead directly to the exterior or street.(kk)Where there is difference in level between connected ares for horizontal exit, ramps not more than 1 in 8 slopes shall be provided. For this purpose steps shall not used.(ll)Doors in horizontal exits shall be openable at all times.(mm)Ramps with a slope of not more than 1 in 10 may be substituted for requirements of staircase. For all slopes exceeding 1 in 10 and wherever the use is such as to staircase. For all slopes exceeding 1 in 10 and wherever the use is such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material.(nn)In any building not provided with automatic fire alarm, a manual fire alarm system shall be provided if the total capacity of the building is over 500 persons, or if more than 25 persons are employed above or below the ground floor, except that not manual fire alarm shall be required in one-storey buildings where with entire area is undivided and all parts thereof are clearly visible to all occupants.(oo)[ If the Chief Inspector is satisfied in respect of any factory or any part of a factory that owing to the exceptional circumstances or for any other reason, to be recorded in writing, all or any of the requirements of this rule are/is impracticable or not necessary for the protection of workers, he may by order in writing, (which he may, at his discretion, revoke), exempt such factory or part of that

factory from all or any of the provisions of the sub-rules subject to conditions as may be specified in the order.] [Substituted by the W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991]

**62. [ (1) First-aid, fire fighting arrangements. [Substituted by the notification no. 340 L.W./L.W./IR-4/85 dated 2nd April 1986]**

(a) In every factory there shall be provided and maintained adequate and suitable fire fighting equipment for fighting fires in the early stages, those being referred to as first-aid fire fighting equipment in this rule. (b) The types of first-aid fire fighting equipment to be provided shall be determined by considering the different types of fire risks which are classified as follows: A. "Class A fire"-Fire due to combustible materials such as wood, textiles, paper rubbish and the like: (i) Light hazards-Occupancies like offices, assembly halls, canteens, rest-rooms, ambulance rooms and the like: (ii) "Ordinary hazards"-Occupancies like saw mills, carpentry shop, small timber yards, book binding shops, engineering workshops and the like; (iii) "Extra hazards"-Occupancies like large timber yards, godowns, storing fibrous materials, flour mills, cotton mills, jute mills large wood working factories and the like: B. "Class B fire": Fire in flammable liquids like oil, petroleum products, solvents, grease, paint etc. C. "Class C fire": Fire arising out of gaseous substances. D. "Class D fire": Fire from reactive chemicals, active metals and the like. E. "Class E fire": Fire involving electrical equipment and delicate machinery and the like. (c) [The number and types of first-aid fire fighting equipment to be provided for "light hazard" occupancy shall be as per Schedule I appended to this rule. For "Ordinary hazard" or Extra hazard" occupancies equipment as prescribed in sub-rule (2) shall be provided in addition to those as specified in Schedule-I] [Substituted by the W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991] A. Class A fire: (i) Light hazard - There shall be one 9-litre water bucket for every 100 square metres of floor area or part thereof and one 9-litre water type (soda-acid or gas pressure or bucket pump) extinguisher for each 6 buckets or part thereof with a minimum of one extinguisher and two buckets per compartment of the building. These equipments shall be so distributed over the entire floor area that no person is required to travel more than 25 metres from any point to reach the nearest equipment. (ii) Ordinary hazard - There shall be one 9-litre water bucket for every 100 square metres of floor area or part thereof and one 9-litre water type (soda-acid, gas pressure or bucket pump) extinguishers for each six buckets or part thereof, with a minimum of 2 extinguishers and 4 buckets per compartment of the building. These equipments shall be so distributed over the entire floor area that no person is required to travel more than 15 metres from any point to reach the nearest equipment. (iii) Extra hazard - The scale of equipment shall be what is prescribed for ordinary hazard and, in addition, such extra equipment as, in the opinion of the Inspector, are necessary, having regard to the special nature of occupancy: Provided that in special cases, the Inspector, after taking into consideration the circumstances, may waive the provision of the buckets prescribed in this sub-clause subject to condition that the number of extinguishers provided is made double than what is prescribed. B. Class B fire: In addition to the requirement as laid down in sub clause A there shall be at least one sand bucket and one fire extinguisher either foam or carbon dioxide or dry power type per 50 square metres of floor area and these shall be so distributed that no person is required to travel more than 15 metres from any point to reach the nearest equipment. C. Class C fire: There shall be at least one carbon dioxide or dry chemical powder extinguisher near each plant or group of plants. D. Class D fire: There shall be special dry powder chloride based type of extinguisher, or sand

buckets on a scale as laid down for class B fire provided that the Inspector may direct a higher-scale of portable equipment depending upon the risk involved. E. Class E fire : There shall be atleast one carbon dioxide or dry powder type extinguisher near each plant or group of plants depending upon the risk involved. (d) All first-aid fire fighting equipment shall conform to the relevant Indian Standards. (e) So far as is reasonably practicable the first-aid fire fighting equipment shall all be of similar shape and appearance and shall have the similar method of operation. (f) All first-aid fire fighting equipment 'shall be placed in a conspicuous position and shall be readily and easily accessible for immediate use. Generally, these equipments shall be placed as near as possible to the exits or stair landing or normal routes of escape. (g) All water buckets and bucket pump type extinguishers shall be filled with clean water. All sand buckets shall be filled with clean, dry and fine sand. (h) All other extinguishers shall be charged in accordance with the instruction of the manufacturer. (i) Each first-aid fire fighting equipment shall be allotted a serial number by which it shall be referred to in the records. The following details shall be painted with white paint on the body of each equipment:-

**1. Serial number,**

**2. Date of last refilling, and**

**3. Date of last inspection/test.**

(j) First-aid fire fighting equipment shall be placed on platforms or in cabinets in such a way that their bottom is 750 mm. above the floor level. Fire buckets shall be placed on hooks attached to a suitable stand or wall in such a way that their bottom is 750 mm. Above the floor level. Such equipment if placed outside the building, shall be under sheds or covers. (k) All extinguishers shall be thoroughly cleaned and recharged immediately after discharge sufficient refill materials shall be kept readily available for this purpose at all times. (l) All first-aid fire fighting equipment shall be subjected to routine maintenance, inspection, and testing which shall be carried out by properly trained persons. Periodicity of the routine maintenance, inspection and test shall conform to the relevant India Standards. (2) Other fire fighting arrangements: - (a) In every factory, adequate provision of water supply for fire fighting shall be made and where the amount of water required in liters per minute as calculated from the formula  $A+B+C+D$  divided by 20 is 550 or more, power driven, trailer pumps of adequate capacity to meet the requirement of water as calculated above shall be provided and maintained. In the above formula- A = the total area in square metres of all floors including galleries in all buildings of the factory; B = the total area in square metres of all floors and galleries including open spaces in which combustible materials are handled or stored; C = the total area in square metres of all floors over 15 metres above ground level; and D = the total area in square metres of all floors of all buildings other than those of fire resisting construction; Provided that in areas where the fire risk involved does not require use of water, such areas under B, C or D may, for the purpose of calculation, be halved: Provided further that where the areas under B, C, or D are protected by permanent automatic fire fighting installations approved by any fire association or fire insurance company, such area may, for the purpose of calculation, be halved: Provided also that where the factory is situated at not more than 3 kilometres from an established city or town fire service, the pumping capacity based on amount of water arrived at by the formula above may be

reduced by 25 per cent; but no account shall be taken of this reduction in calculating water supply required under clause (a). (b) Each trailer pump shall be provided with equipment as per schedule [II] [Inserted by W. B. Factories (Amendment) Rules, 1991 dated 27.11.1991] appended to this rule. Such equipment shall conform to the relevant Indian Standards. (c) Trailer pumps shall be housed in a separate shed or sheds which shall be sited close to a principal source of water supply in the vicinity of the main risks of the factory. (d) In factories where the area is such as cannot be reached by manhauling of trailer pumps within reasonable time, vehicles with towing attachment shall be provided at the scale of one for every four trailer pumps with a minimum of one such vehicle kept available at all times. (e) Water supply shall be provided to give flow of water as required under clause (a) for at least 100 minutes. At least 50 per cent, of this water supply or 450,000 litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than 450,000 litres each) distributed round the factory with due regard to the potential fire risks in the factory. Where piped supply provided, the size of the main shall not be less than 15 centimetres diameter and it shall be capable of supplying a minimum of 4,500 litres per minute at pressure of not less than 0.7 kilogram per square centimeter. (f) All trailer pumps including the equipment provided with them and the vehicles for towing them shall be maintained in good condition and subjected in periodical inspection and testing as required.

### **3. Personnel in charge of equipment and for fire-fighting, fire-drills, etc. - (a) The first-aid and other fire fighting equipment to be provided as required in sub-rules (1) and (2) shall be incharge of a trained responsible person.**

(b) Sufficient number of persons shall be trained in proper handling of fire fighting equipment as referred to in clause (a) and their use against the types of fire for which they are intended, to ensure that adequate number of persons are available for fire fighting both by means of first-aid fire fighting equipments and others. Wherever vehicles with towing attachment are to be provided as required in the clause (d) of sub rule (2) sufficient number of persons shall be trained in driving those vehicles to ensure that the desired number of such trained persons are available for driving them whenever the need arises. (c) Fire fighting drills shall be held at least once in every [2] [Substituted by West Bengal Factories (Amendment) Rules, 1991 dated 27.11.1991] months. (4) Automatic sprinklers and fire hydrants shall be in addition and not in substitution of the requirements in sub-rules (1) and (2). (5) If the Chief Inspector is satisfied in respect of any factory or any part of a factory that owing to the exceptional circumstances such as inadequacy of water supply or infrequency of the manufacturing process or for any other reason, to be recorded in writing all or any of the requirements of this rule are impracticable or not necessary for the protection of workers, he may by order in writing (which he may at his discretion revoke) exempt such factory or part of that factory from all or any of the provisions of the sub-rules subject to conditions as he may by such order specify. [Schedule I [Substituted by West Bengal Factories (Amendment) Rules, 1991 dated 27.11.1991] First aid fire fighting Equipments] (1) The different type of fires and first aid fire fighting equipments suitable for use on them are as under;-

Class of Fire

Suitable type of appliances

A. Fires in ordinary combustibles (wood, vegetable fibres, paper and the like).	Chemical extinguishers of soda-acid, gas/ expelled water and anti-freeze types, and water buckets.
B. Fires in flammable liquids, paints, Grease, solvent and the like.	Chemical extinguishers of foam, carbon-di-oxide and dry powder types and sand buckets.
C. Fires in gaseous substances under pressure.	Chemical extinguishers of carbon-di-oxide and dry powder types.
D. Fires in reactive chemicals, active metals and the like.	Special type of dry powder extinguishers and sand buckets.
E. Fires in electrical equipments.	Chemical extinguishers of carbon-di-oxide and dry powder type and sand buckets.

(2) One 9 litres water bucket shall be provided for every 100 sq. m. of the floor area or part thereof and one 9 litres water type extinguisher shall be provided to six buckets as per compartment of the building. Buckets may be dispensed with, provided supply of extinguishers is double than that as indicated above. (3) Acceptable replacements for water buckets and water type extinguishers in Occupancies where class B fires are anticipated, are as under :-

	Bucket of water	Water type extinguisher For each 9 litres. (or 2 gallons) extinguishers	
Acceptable replacements	For one bucket	For three bucket	
Dry sand Carbon Dioxide Extinguisher	1 bucket 3 Kg. (or 7 lbs)	3 buckets 9Kg. (or 20 lbs)	9 Kg. (or 20 lbs)
Dry powder	2Kg (or 5 lbs)	(in not less than 2 extinguishers 5 Kg. (or 11 lbs) (in one more extinguishers)	5 Kg. (or 11 lbs)
Foam Extinguisher	9 litres (or 2 gallons)	9 litres (or 2 gallons)	9 litres (or 2 gallons)

Notes - Existing Schedule renumbered Schedule II and Schedule I inserted by Amendment Rules, 1991 (4) The following provisions shall be complied with where Class E fires are anticipated: (a) For rooms containing electrical transformers, switchgears, motors and/or other electrical apparatus only, not less than two 2 kg. Dry powder or Carbon-Di-oxide type extinguishers shall be provided within 15m. of the apparatus. (b) Where motors and/or other electrical equipments are installed in rooms other than those containing such equipment only, one 5 kg. Dry powder or Carbon Dioxide extinguisher shall be installed within 15 m. of such equipment in addition to the requirements as mentioned at items (3) and (4) (a) above. For this purpose the same extinguisher may be deemed to afford protection to all apparatus within 15 m. (c) Where electrical motors are installed on platforms, one 2 kg. Dry powder or Carbon Dioxide type extinguisher shall be provided on or below each platform. In case of a long platform with a number of motors, one extinguisher shall be acceptable as adequate for every 3 motors on the common platform. The above requirements shall be in addition to the requirements mentioned at items (3) and (4) (a) and (b) above. (5) The first aid fire fighting equipments shall be so distributed over the entire floor area that a person has to travel not more than 15m. to reach the nearest equipment. (6) Selection of sites for the installation of first aid fire fighting equipments. (a) While selecting sites for first aid fire fighting equipments, due consideration shall be given to the nature of the risk to be covered. The equipments shall be placed

in conspicuous positions and shall be readily accessible for immediate use in all parts of the occupancy. It shall always be borne in mind while selecting sites that first aid fire fighting equipments are intended only for use on incipient fires and their value may be negligible if the fire is not extinguished or brought under control in the early stages.(b) Buckets and extinguishers shall be placed at convenient and easily accessible locations either on hangers or on stands in such a way that their bottom is 750mm. above the floor level.(7) The operating instructions of the extinguishers shall not be defaced or obliterated. In case the operating instructions are obliterated or have become illegible due to passage of time, fresh transfers, of the same shall be obtained from the manufacturers of the equipments and affixed to the extinguishers.[Schedule- II] [Schedule II Renumbered as Schedule II by West Bengal Factories (Amendment) Rules, 1991.] Equipment to be provided with trailer pump For light trailer pump of a capacity of 680 litres/minute

**1. Armoured suction hose of 9 metres length, with wrenches.**

**1. Metal suction strainer.**

**1. Basket strainer.**

**1. Two-way suction collecting-head.**

**1. Suction adaptor.**

**10. Unlined or rubber-lined 70 mm. delivery hose of 25 metres length complete with quick-release couplings**

**1. Dividing breaching-piece.**

**2. Branch-piece with 15 mm nozzles.**

**1. Standpipe with blank cap.**

**1. Hydrant key.**

**4. Collapsible canvas buckets.**

**1. Fire hook (preventor) with cutting edge.**

**1. 25 mm. manila rope of 30 metres length.**



**1. Extension ladder of 9 metres length (where necessary)**

**1. Heavy axe.**

**1. Spade**

**1. Pick axe.**

**1. Saw.**

**1. Crowbar.**

**1. Hurricane lamp.**

**1. Electric torch.**

**1. Pair rubber gloves.**

For large trailer pump of a capacity of 1,800 liters/minute

**1. Armoured suction hose of 9 metres length, with wrenches.**

**1. Metal strainer.**

**1. Basket strainer.**

**1. Three-way suction collecting head.**

**1. Suction adaptor.**

**14. Unlined or rubber-lined 70mm. delivery hose of 25 metres length complete with quick-release couplings.**

**1. Dividing breaching-piece.**

**1. Collecting breaching-piece**

**4. Branch pipes with one 25 mm., two 20mm.; one diffuser nozzles.**

**2. Hydrant keys.**

**6. Collapsible canvas buckets.**

**1. Ceiling hook (preventor) with cutting edge.**

**1. 50mm. manila rope of 30 metres length (where necessary)**

**1. Heavy axe.**

**1. Spade.**

**1. Pick axe.**

**1. Crowbar.**

**1. Saw.**

**1. Hurricane lamp.**

**1. Electric torch.**

**1. Pair of rubber gloves**

Rules prescribed under section 112.

**63. Prohibition of smoking and naked lights.**

- There shall be exhibited, in English and in the language of the majority of the workers, a notice prohibiting smoking and use of naked lights, in any place where they would be dangerous, or where the Inspector may require, and all other reasonable precautions against fire shall be taken.[CHAPTER IV A] [Chapter IVA Inserted by West Bengal Factories (Amendment) Rules, 1991] Provision relating to hazardous processes Rules prescribed under section 41A (1) and 112.

**63A. Site Appraisal Committee:**

- (1) Constitution: The following provisions shall govern the functioning of the Site Appraisal Committee, hereinafter referred to in these rules as the 'Committee' :-(a)The State Government may constitute a Site Appraisal Committee and reconstitute the Committee as and when necessary.(b)The State Government may appoint a senior official of the Factories Directorate, preferably with qualification in Chemical Engineering to be the Secretary of the Committee and the

following as members of the Committee : (i) A representative of the Directorate of Fire Services, West Bengal; (ii) A representative of the Directorate of Industries, West Bengal; and (iii) A representative of the Director General of Factory Advice Service and Labour Institutes, Bombay. (2) No member of the Committee, unless required to do so by a Court of Law, shall disclose otherwise than in connection with the purpose of the Act, at any time any information relating to manufacturing or commercial business or any working process which may come to his knowledge during his tenure as a member of the Committee. (3) Application for appraisal of sites : - (a) Application for appraisal of sites in respect of the factories covered under section 2 (cb) of the Act shall be submitted to the Chairman of the Committee. (b) The application for site appraisal alongwith 15 copies thereof shall be submitted in Form No. 31 annexed to this rule. The Committee may dispense with furnishing information on any particular item in the application Form if it considers the same to be not relevant to the application under consideration. (4) Function of the Committee : - (a) The Secretary shall arrange to register the applications received for appraisal of site in a separate register and acknowledge the same within a period of 7 days from the date of receipt. (b) The Secretary shall fix-up meeting in such a manner that all the applications received and registered are referred to the Committee within a period of one month from the last date of their receipt. (c) The Committee may adopt a procedure for its working keeping in view, the need for expeditious disposal of applications. (d) The Committee shall examine the application for appraisal of a site with reference to the prohibitions and restrictions on the location of industry and carrying on of processes and operations in different areas as per the provisions of rule 5 of the Environment (Protection) Rules, 1936 framed under the Environment Protection Act, 1986. (e) The Committee may call for documents, examine experts, inspect the site if necessary and take other steps for formulating its view in regard to the suitability of the site. (f) Wherever the proposed site requires clearance by the Ministry of Industry and/or the Ministry of Environment and Forests, the application for Site Appraisal will be considered by the Site Appraisal Committee only after such clearance has been received. Rules prescribed under sections 74 (3), 41 B(2) and 112.

### **63B. Health and Safety Policy.**

(1) The occupier of every factory, otherwise than specified in sub-rule (2), shall prepare a written statement of his policy in respect of health and safety of workers at work. (2) The requirement of sub-rule (1) shall not apply to factories- (a) covered under section 85 of the Act ; (b) covered under section 2 (m) (i) of the Act wherein less than 50 workers are employed ; and (c) covered under section 2(m) (ii) of the Act wherein less than 100 workers are employed : Provided that they are not carrying on any process activity or operation declared to be dangerous under section 87 of the Act or specified in the First Schedule to Section 2 (cb) of the Act. (3) Notwithstanding anything contained in sub-rule (2) the Chief Inspector having regard to the nature of the work carried on in a factory may, by an order in writing, extend the provisions of sub-rule (1) to any factory or class or description of factories, if, in his opinion, it is expedient to do so. (4) The Health and Safety Policy shall contain, inter alia, the following:- (a) The intention and commitment of the top management to secure health, safety and environment and to comply with all the relevant statutory requirements; (b) The organizational set-up in the factory to carry out the declared policy clearly stating the responsibility assigned at each stage of the organization; and (c) The arrangements provided for making the policy effective. (5) In particular, the policy shall specify the following :- (a) arrangements to involve the

workers:(b)health and safety performance of individuals and their career advancement;(c)responsibility of the contractors, sub-contractors, suppliers, transporters and other agencies within the factory;(d)inclusion of health and safety performance of the factory in its Annual Report;(e)periodical assessment of the status on health, safety and environment by appropriate methods and techniques, such as safety and its, risk assessment etc. and remedial measures;(f)intentions to integrate health and safety, in all decisions including purchase of plant equipment, machinery, and material as well as selection and placement of personnel; and(g)arrangements for informing, educating and training including retraining the employees at all levels and informing the public, wherever required.(6)The health and safety policy so declared and signed by the occupier shall be submitted to the Chief Inspector and a copy thereof shall be kept readily available for perusal by the Inspector.(7)The policy shall be made widely known to all workers including contract workers, apprentices, trainees, transport workers, apprentices, trainees, transport workers, suppliers etc. by-(a)making copies available to them;(b)displaying copies of the policy at conspicuous places; and(c)any other means of communication in a language understood by the majority of workers.(8)The occupier shall revise the safety policy as often as may be appropriate or as may be required by the Chief Inspector, but it shall necessarily be revised under the following circumstances :(a)Whenever any expansion or modification having implications on health and safety of persons at work is made, or(b)Whenever new substances or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.Rule prescribed under section 41 and 41 (G)

### 63C. Safety Committee

(1)in every factory-(a)wherein 250 or more workers are ordinarily employed; or(b)which carries on any process or operation declared to be dangerous under section 87 of the Act; or(c)which carries on hazardous process as defined under section 2 (cb) of the Act; There shall be a safety committee.(2)The representatives of the management on Safety Committee shall include (a)a senior executive, who by his technical qualification and position in the organisation can contribute effectively to the functioning of the Committee, shall be the Chairman;(b)a Safety Officer and a Factory Medical Officer wherever available and in such a case the Safety Officer shall be the Secretary of the Committee;(c)one representative each from the production maintenance, purchase and personnel departments.(3)The Workers' representatives in the Safety Committee shall be such as to represent majority of the shop floors.(4)The tenure of the Committee shall be two years.(5)Safety Committee shall meet as often as necessary but not less than once in a quarter. The minutes of the meeting shall be recorded and be readily available to the Inspector on demand.(6)Safety Committee shall have the right to obtain from the manager any information relating to-(a)potential safety and health hazards to which the workers may be exposed while they are at work;(b)accidents as well as date resulting from surveillance of the working environment and of the health of workers exposed to hazardous substances so far as the factory is concerned;(c)health records or the medical records of the workers maintained under section 41 C of the Act;Provided that the Committee undertakes to use the data, on a confidential basis, solely to provide guidance and advice on measures to improve the working environment and the health and safety of the workers.(7)Function and duties of the Safety Committee shall include-(a)assisting and co-operating with the management in achieving the aims and objectives outlined in the 'Health and Safety Policy'

of the occupier;(b)dealing with all matters concerning health, safety and environment and to arrive at practicable solutions to the problems encountered;(c)creating safety awareness amongst all workers;(d)undertaking education, training and promotional activities towards health and safety;(e)discussing reports on safety, environmental and occupational health surveys, safety audits and risk assessment for implementation of the recommendations made in the reports;(f)discussing on-site emergency plan and disaster control measures for effective implementation;(g)carrying out health and safety surveys and indentifying causes of accidents;(h)looking into any complaint made out of apprehension on the likelihood of an imminent danger to the safety and health of the workers, suggesting corrective measures and reviewing the implementation of the remedial measures taken to eliminate danger; and(i)reviewing and analysing the work and operational procedures for identification of hazards and their elimination.(8)Where owing to the nature and size of the factory, or any other reason, functions referred to in sub-rule 7 cannot be effectively carried out by Safety Committee, it shall establish sub-committee as may be required to assist it.Rule prescribed under sections 41 B and 112.

### **63D. Collection, development and dissemination of information :**

(1)The occupier of every factory involving a 'hazardous process' shall arrange to obtain or develop information in the form of Material Safety Data Sheet (MSC'S) in respect of every hazardous substance or material used, manufactured, stored, handled or transported in the factory. It shall be accessible upon request to a worker for reference and shall be kept readily available to the Inspector.(a)Every such Material Safety Data Sheet shall be maintained as nearly as possible in Form No.32 and shall include the following information :(i)the identity used on the label;(ii)the chemical name with molecular formula and its synonyms, if any;(iii)hazardous ingredients of the substance;(iv)physical and chemical characteristics of the hazardous substance;(v)the physical hazards of the substance, including the potential for fire, explosion and reactivity;(vi)the health hazards of the substance, including signs and symptoms of exposure and any medical conditions which are generally recognized as being aggravated by exposure to the substance;(vii)the primary routes of entry;(viii)the permissible limits of exposure prescribed in the Second Schedule under Section 41 F of the Act and in the case of a chemical not covered by the said Schedule, the limits of exposure recommended by the American Conference of Government Industrial Hygienists (ACGIH);(ix)the ceiling value, i.e., the concentration that should not be exceeded even instantaneously;(x)the precautions required for safe handling and use of the hazardous substance including appropriate hygienic practices, protective measures during repairs and maintenance of contaminated equipment;(xi)any generally applicable control measures, such as engineering controls, work practices or use of personal protective equipment;(xii)emergency and first-aid procedures;(xiii)the procedures for clean-up of spills and leaks;(xiv)the procedures for disposal of wastes and empty containers;(xv)any other information relevant to health and safety;(xvi)the name, address and telephone number of the manufacturer, importer, occupier or other responsible person who has prepared or furnished the Material Safety Data Sheet and who provides additional information on the hazardous substance and appropriate emergency procedures, if necessary; and(xvii)the date of preparation of the Material Safety Data Sheet, or the last change to it.(b)The occupier while obtaining or developing a Material Safety Data Sheet in respect of hazardous substance shall ensure that the information is recorded accurately and reflects the scientific

evidence used in making the hazard determination.(c)The Material Safety Data Sheet in respect of a hazardous substance shall be updated as and when necessary due to any new significant information regarding the hazards of the substance or the ways to protect against the hazards.(2)Every container of a hazardous substance shall be clearly labelled or marked to identify :-(a)the contents of the contained ;(b)the name and address of the manufacturer/importer of the hazardous substance;(c)the physical and health hazards;(d)compatibility of the substance; and(e)the recommended personal protective equipment.Rule prescribed under Section 41B and 112.

### **63E. Disclosure of information to workers:**

(1)The occupier of a factory carrying on a hazardous process shall supply to all workers the following information in relation to use and handling of hazardous materials or substance in the manufacture, transportation, storage or other processes : (a)requirements of sections 41B, 41C and 41H of the Act;(b)a list of 'hazardous processes' carried on in the factory;(c)location and availability of all Material Safety Data Sheets as per rule 63D;(d)physical and health hazards arising from the exposure to or handling of substance;(e)measures taken by the occupier to ensure safety and to control health hazards;(f)measure to be taken by the workers to ensure safe use, handling, storage and transportation of hazardous substance;(g)personal protective equipment required to be used by workers employed in hazardous process or dangerous operations;(h)meaning of various labels and markings used on the containers of hazardous substance as provided under the rule 63D;(i)signs and symptoms likely to be manifested on exposure to hazardous substances;(j)measures to be taken by the workers in case of any spillage or leakage of a hazardous substance;(k)role of workers vis-a-vis the emergency plan of the factory, in particular the evacuation and control procedures; and(1)any other information necessary to ensure safety and health of workers.(2)The information required by sub-rule (1) shall be compiled with and made known to workers individually through supply of booklets or leaflets and display of cautionary notices at the work places.(3)The booklets, leaflets and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers, and the contents shall be explained to them.(4)Copies of all such booklets, leaflets shall be kept available to the Inspector for his perusal.(5)The Chief Inspector may direct the occupier to supply further information, if in his opinion, it is expedient to do so.Rule Prescribed under sections 41B and 112.

### **63F. Disclosure of information to the Chief Inspector**

(1)The Occupier of every factory carrying on hazardous process shall furnish, in writing, the following information to the Chief Inspector and to the local Inspector:-(a)a copy of all the information furnished to the workers, and(b)a copy of compilation of Material Safety Data Sheets in respect of hazardous substances used, produced or stored in the factory.(2)The occupier shall also furnish any other information as may be asked for by the Chief Inspector for the purpose of this Act and the rules made thereunder.Rule prescribed under sections 41B and 112.

### **63G. Information on industrial wastes:**

(1)The information furnished under rules 63E and 63F shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the methods of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes and the arrangements for their final disposal.(2)It shall also include information on the quality and quantity of gaseous waste discharged through the stacks or other openings, and arrangements such as provision of scrubbers, cyclone separators, electrostatic precipitators or other such arrangement made for controlling pollution of the environment.(3)The occupier shall also furnish the information prescribed in the sub-rules (1) and (2) to the State Pollution Control Boards.Rules prescribed under sections 41B and 112.

### **63H. Review of the information furnished to workers etc.:**

(1)The occupier shall review at least once in every calendar year and modify, if necessary, the information furnished under rules 63E and 63F to the workers and Chief Inspector.(2)In the event of any change in the process or operations or methods of work or when any new substance is introduced in the process or in the event of a serious accident taking place, the information so furnished shall be reviewed and modified to the extent necessary.Rule prescribed under section 112.

### **63. I. Confidentiality of information:**

(1)The occupier of a factory carrying on 'hazardous process' shall disclose all information needed for protecting safety and health of the workers to (a) his workers; and (b) Chief Inspector as required under rules 63E and 63F. If the occupier is of the opinion that the disclosure of details regarding the process and formulations will adversely affect his business interests, he may make a representation to the Chief Inspector stating the reasons for which such details should be withheld. The Chief Inspector shall give an opportunity to the occupier of being heard and pass an order on the representation.(2)An occupier aggrieved by an order of the Chief Inspector may, within thirty days of the order so passed, prefer an appeal against it to the State Government.The State Government shall give the opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final.Rule prescribed under section 4113, 41C and 112.

### **63J. Medical Examination:**

(1)Every worker employed in a 'hazardous process' shall be medically examined by a qualified medical practitioner hereinafter referred to as Factory Medical Officer, in the following manner : (a)once before employment, to ascertain his physical fitness to do the job;(b)once in period every six months, to ascertain his health status in respect of the occupational health hazards to which he is exposed or at a shorter interval, if in the opinion of the Medical Inspector or of Factories it is necessary to do so; and(c)the details pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health Register in Form 17.(2)No person shall be employed for the first time in the factory unless a Certificate of Fitness in Form 25 is granted for such

employment by the Factory Medical Officer. A person declared unfit by the Factory Medical Officer for employment in any process covered under sub-rule (1), shall have the right to appeal to the Inspector who shall refer the matter to the Medical Inspector of Factories/Certifying Surgeon whose opinion shall be final in this regard.(3)If any abnormality or unsuitability in respect of worker employed in the process covered under sub-rule (1) is revealed during any medical examination under the said sub-rule, the Factory Medical Officer shall immediately refer the matter to the Certifying Surgeon/Medical Inspector of Factories who, in turn, shall examine the concerned worker and communicate his findings to the occupier within 30 days. If the Certifying Surgeon is of the opinion that the workers so examined is unsuitable for employment in the said process, he shall make a record of his findings in the certificate and the Health Register maintained under this rule and direct the occupier accordingly prohibiting employment of the said worker in the same process.(4)The worker so suspended from the process shall be provided with alternate placement facilities unless he is, in the opinion of the Certifying Surgeon, fully incapacitated in which case the worker affected shall be suitably rehabilitated.(5)A Certifying Surgeon on his own or on a reference from an Inspector may conduct medical examination of a worker to ascertain the suitability or his employment in a hazardous process or for ascertaining his health status. The opinion of the Certifying Surgeon in such a case shall be final.(6)A worker who has been found unfit to work under sub-rule (3) shall not be employed again in the same process unless the Certifying Surgeon, after further examination, again certifies him fit for employment in the said process which shall be duly entered in the aforesaid Health Register.(7)No worker shall refuse to undergo medical examination under these rules or under any medical survey conducted by or on behalf of the Central or the State Government.Rules prescribed under Sections 41B, 41C and 112

### **63K. Occupational Health Centres**

(1)The occupier of a factory carrying on a 'hazardous process' shall provide and maintain in good order in Occupational Health Centre with the services and facilities as per scale laid down hereunder-(a)For factories employing upto 50 workers.(i)the services of a Factory Medical Officer shall be available to carry out the pre-employment and post-employment periodical medical examination as stipulated under rule 63J and to render medical assistance as and when required;(ii)there shall be a minimum of 5 persons trained in first-aid procedures of whom at least one person shall always be available during the working hours; and(iii)there shall be fully equipped first-aid box for the use of the workers.(b)For factories employing 51 to 250 workers :-(i)there shall be an Occupational Health Centre having room with a minimum floor area of 15 sq.m. with floors and walls upto a height of 1.5 metres made a smooth and impervious surface. The Occupational Health Centre shall be provided with adequate illumination and ventilation as well as equipment as per the Schedule annexed to this rule;(ii)there shall be a Factory Medical Officer in overall charge of the centre who shall attend the center at least thrice in a week and whose services shall be readily available during emergencies;(iii)there shall be one qualified and trained dresser-cum-compounder on duty in each shift;(iv)adequate number of fully equipped first-aid boxes shall be provided in the factory.(c)For factories employing above 250 workers :-(i)there shall be one full time Factory Medical Officer for factories employing upto 1000 workers and one more Factory Medical Officer for every additional 500 workers or part thereof;(ii)there shall be an Occupational Health Centre having at least two rooms each with a minimum floor area of 15 sq.metres with floors and walls upto a



height of 1.5 metres made of smooth and impervious surface;(iii)the center shall be provided with adequate ventilation and illumination as well as equipment as per the schedule annexed to this rule;(iv)there shall be one qualified nurse, one qualified and trained dresser-cum-compounder and one sweeper-cum-ward boy in each shift; and(v)the center shall be suitably equipped to manage medical emergencies.(2)The Factory Medical Officer required to be appointed under sub-rule (1) shall have qualifications included in Schedules to the Indian Medical Degrees Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and possess a certificate of training in Industrial Health of minimum three months duration recognised by the State Government; Provided that(i)a person possessing a diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid:(ii)the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment;(iii)in case of a person who has been working as a Factory Medical Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to such condition as he may specify, relax the requirement of sub-rule (2).(3)Within one month of the appointment of a Factory Medical Officer, the occupier of the factory shall furnish to the Chief Inspector the following particulars :- (a)name and address of the Factory Medical Officer;(b)qualification;(c)experience, if any, and(d)the sub-rule under which appointed.

## **Schedule 14**

Equipment for Occupational Health Centre in Factories.

- 1. A glazed sink with hot and cold water always available.**
- 2. A table with a smooth top at least 180 cm x 105 cm.**
- 3. Means for sterilizing instruments.**
- 4. A couch.**
- 5. Two buckets or containers with close fitting lids.**
- 6. A kettle and spirit stove or other suitable means of boiling water.**
- 7. One bottle of spirits ammoniac aromaticus (120 ml).**
- 8. Two medium size sponges.**
- 9. Two 'Kidney' trays.**

- 10. Four cakes of toilet, preferably antiseptic soap.**
- 11. Two glass tumblers and two wine glasses.**
- 12. Two clinical thermometers.**
- 13. Two tea spoons.**
- 14. Two graduated (120 ml) measuring glasses.**
- 15. One wash bottle (1000 cc) for washing eyes.**
- 16. One bottle (one litre) carbolic lotion in 20.**
- 17. Three chairs.**
- 18. One screen.**
- 19. One torch light.**
- 20. An adequate supply of tetanus toxoid.**
- 21. Coramine liquid (60 ml).**
- 22. Tablets antistaminic and antispasmodic (25 each).**
- 23.**  
  
Syringes with needles preferably disposal type- 2 cc., 5 c.c. and 10 c.c
- 24. Two needle holders- big and small.**
- 25. Suturing needles and materials.**
- 26. One dissecting forceps.**
- 27. One dressing forceps.**

**28. One scalpel.**

**29. One stethoscope.**

**30. Rubber bandage-pressure bandage.**

**31. Oxygen cylinder with necessary attachments.**

**32.**

One blood pressure apparatus.

**33. One patellar hammer.**

**34. One peak flow meter for lung function measurement.**

**35. One stomach wash set.**

**36. Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process.**

**37. In addition-**

(1)For factories employment 51 to 250 workers(1)Four plain wooden splints-900 mm x 100 mm x 6 mm(2)Four plain wooden splints-350 mm x 65 mm x 6 mm(3)Two plain wooden splints-250 mm x 50 mm x 12 mm(4)One pair artery forceps.(5)Injections-morphia, pethidine, atropine, adrenaline, coramine, novocan (2 each).(6)One surgical scissors.(2)For the Factories employing more than 250 workers-(1)Eight plain wooden splints- 900 mm x 100 mm x 6 mm(2)Eight plain wooden splints- 350 mm x 75 mm x 6 mm(3)Four plain wooden splints- 250 mm x 50 mm x 12 mm(4)Two pairs artery forceps.(5)Injections-morphia, pethidine, atropine, adrenaline. coramine, novocan (4 each).(6)Two surgical scissors.Rule prescribed under sections 41C & 112.

**63L. Ambulance Van.**

(1)In any Factory carrying on a 'hazardous process' there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full time driver-cum-mechanic and a helper trained in first-aid, for the purposes of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose stipulated herein and will normally be stationed at or near the Occupational Health Centre. Provided that a factory employing less than 250 workers, may make arrangements for procuring such facility at short notice from a nearby hospital or other places, to meet any emergency.(2)The Ambulance should have the following equipments :- (a)General.(i)wheeled stretcher with folding and

adjusting devices; with the head of the stretcher capable of being tilted upward.(ii)Fixed suction unit with equipment.(iii)Fixed oxygen supply with equipment.(iv)Pillow with case, sheets, blankets, towels.(v)Emesis bag, bed pan, urine pot. glass.(b)Safety Equipment(i)Flares with life of 30 minutes. flood lights.(ii)Flash lights, fire extinguisher-dry powder type.(iii)Insulated gauntlets.(c)Emergency care Equipment.I. Resuscitation.(i)Portable suction unit; portable oxygen unit.(ii)Bag-valve-mask, hand-operated artificial ventilation unit.(iii)Airways, mouth gag, tracheostomy adaptors.(iv)Short spine board I.V. Fluids with administration unit.(v)B.P. Manometer, cups, stethoscope..II. Immobilization.(i)Gauze pads-10 cm. X 10 cm-universal dressing 25 cm. x 90 cm.(ii)Roll or aluminium foils. soft roller bandages 15 cm. x 5 cm.(iii)Adhesive tape in 75 mm. rolls, safety pins.III. Poisoning.(i)Syrup of Ipecac. activated charcoal prepackaged in doses,(ii)Snake bit kit, drinking water.IV Emergency Medicines.As per requirement (under the advice of Medical Officer only).Rule prescribed under Sections 41C and 112.

### 63M. Decontamination Facilities

- In every factory carrying out a 'hazardous process' the following shall be provided and maintained to meet any emergency :-(a)Readily accessible means of water for washing by workers as well as for drenching the clothing of workers who have been contaminated with hazardous and corrosive substance and such means shall be as per the scale shown in the table below :-Table

No. of persons employed at any time	No. of drenching showers
(i) Upto 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 50 or part thereof.
(iii) Between 201 to 500 workers	5 + 1 for every additional 100 or part thereof.
(iv) 501 workers and above	8 + 1 for every additional 200 or part thereof.

(b)A sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cup boards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.Rule prescribed under section 41C & 112.

### 63N. Accessibility to Health Records:

(1)The occupier of every factory carrying on a 'hazardous process' shall make accessible the health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records of any worker for his perusal as laid down hereunder.(a)Once in every period of six months or immediately after the medical examination, whichever is earlier;(b)If the Factory Medical Officer or the Certifying Surgeon, as the case may be, is of the opinion that the worker has manifested signs and symptoms of any notifiable disease as specified in the third schedule of the Act;(c)If the worker leaves the employment;(d)If any one of the following authorities so direct(i)the Inspector of Factories;(ii)the Health Authority of the Central or State Government.(iii)Commissioner for Workmen's Compensation;(iv)The Director-General, Employees'

State Insurance Corporation;(v)The Director, Employees' State Insurance (Medical Benefit) Scheme; and(vi)The Director-General, Factory Advice Service and Labour Institutes.(2)A copy of the up-to-date health records including the period of worker's exposure to hazardous process or, as the case may be, the medical records shall be supplied to the worker on receipt of an application from him. X-Ray plates and other medical diagnostic reports may also be made available for reference to his medical practitioner.Rule prescribed under section 41C and 112.

### **63O. Qualifications etc. of Supervisors:**

(1)All persons who are appointed or required to supervise the works involving manufacture, use, storage and handling of hazardous substances shall possess the following qualification and experience :-(a)(i)a degree in Chemistry or Diploma Chemical Engineering or Technology with 5 years' experience; or(ii)a Master's degree in Chemistry or a degree in Chemicals Engineering or Technology with 2 years' experience.(2)The syllabus and duration of the above training and the Organisations conducting the training shall be approved by the Director-General, Factory Advice Service and Labour Institute (DGFASLI), Govt. of India or the State Government.Rule prescribed under section 112.

### **63P. Issue of Guidelines**

- For the purpose of compliance with the requirements of sub-section (1), (4) and (7) of section 41B or section 41C of the Act the Chief Inspector may issue guidelines from time to time to the occupier of a factory carrying on a 'hazardous process' if, in his opinion, it is deemed necessary. Such guidelines may be based on National Standards, Codes of Practice, or recommendations of International Bodies such as International Labour Organisation, World Health Organisation etc.

## **Chapter V**

### **Welfare**

Rule prescribed under sub-section (2) of section 42.

### **64. Washing facilities.**

(1)There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.(2)Without prejudice to the generality of the foregoing provisions the washing facilities shall include-(a)a trough with taps or jets at intervals of not less than 61 cm., or(b)wash basins with taps attached thereto, or(c)taps on stand-pipes, or(d)showers controlled by taps, or(e)circular troughs of the fountain type, provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall be installed.(3)(a)Every trough and basin shall have a smooth, impervious surface and shall be fitted with a waste pipe and plug.(b)The floor or ground under and in the immediate vicinity

of every trough, tap, jet, wash-basin, stand-pipes and shower shall be so laid or finished as to provide a smooth impervious surface and shall be adequately drained.(4)For persons whose work involves contact with any injurious or noxious substance there shall be at least one tap for every fifteen persons; and for persons whose work does not involve such contact the number of taps shall be as follows:

No. of workers	No. of taps.
Up to 20	1
21 to 35	2
36 to 50	3
51 to 150	4
151 to 200	5
Exceeding 200 but not exceeding 500	5 plus one tap for every 50 or fraction of 50.
Exceeding 500	11 plus one tap for every 100 fraction of 100.

(5)If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass. The entrance to such facilities shall bear conspicuous notice in the language understood by the majority of the workers "For Women Only", and shall also be indicated pictorially.(6)The water-supply to the washing facilities shall be capable of yielding at least 9 litres a day for each person employed in the factory.

## **65. [ First-aid appliances. [Rule 65 substituted by the West Bengal Factories (Amendment) Rules, 1991]**

- The first-aid boxes or cupboards shall be distinctively marked with a red cross on white background and shall contain the following equipments :(a)For factories in which the number of persons employed does not exceed ten, or in the case of factories in which mechanical power is not used, does not exceed fifty persons, each first aid box of cupboard shall contain the following equipments:(i)Six small size sterilised dressings.(ii)Three medium size sterilised dressings.(iii)Three large size sterilised dressings.(iv)The large size sterilised burn dressings.(v)One (60 ml) bottle of centrimide solution (1%) or a suitable antiseptic solution.(vi)One (60 ml) bottle of mercurochrome solution (2%) in water.(vii)One (30 ml) bottle containing sal-volatile having the dose and mode of administration indicated on the label.(viii)One pair of scissors.(ix)One roll of adhesive plaster (2 cm x 1 m).(x)Six pieces of sterilised eye pads in separate sealed packet.(xi)A bottle containing 100 tablets (each of 325 mg) of aspirin or any other analgesic.(xii)Polythene wash bottle (1/2 litre, i.e. 500 cc) for washing eyes.(xiii)A snake-bite lancet.(xiv)One (30 ml.) bottle containing potassium permanaganate crystals.(xv)One copy of first-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India, Bombay.(b)For factories in which mechanical power is used and in which the number of persons employed exceed ten but does not exceed fifty, each first-aid box or cupboard shall contain the following equipments :(i)Twelve small size sterilised dressings.(ii)Six medium size sterlised dressings.(iii)Six large size sterlised dressings.(iv)Six large size sterilised burn dressings.(v)Six (15 gm) packets of sterilised cotton

wool,(vi)One (120 ml) bottle of centrimide solution (1%) or a suitable antiseptic solution.(vii)One (120 ml) bottle of containing, salvolatile having the dose and mode of administration indicated on the label.(viii)One (120 ml) bottle of mercurochrome (2%) solution in water.(ix)One pair of scissors.(x)Two rolls of adhesive plaster ( 2 cm x 1 m.).(xi)Eight pieces of sterilised eye pads in separate sealed packets.(xii)One tourniquet.(xiii)One dozen safety pins.(xiv)A bottle containing 100 tablets (each of 325 mg) of aspirin or any other analgesic.(xv)One polythene wash bottle (1/2 litre i.e. 50 cc) for washing eyes.(xvi)A snake-bite lancet.(xvii)One (30 ml) bottle containing potassium permanganate crystals.(xviii)One copy of the first-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institute, Govt. of India, Bombay.(c)For factories employing more than fifty persons. each first-aid box or cupboard shall contain the following equipments :- (i)Twenty-four small sterilised dressings.(ii)Twelve medium size sterilised dressings.(iii)Twelve large size sterilised dressings.(iv)Twelve large size sterilised burn dressings.(v)Twelve (15 gm) packets of sterilised cotton wool.(vi)One (200 ml) bottle of centrimide solution (1% or a suitable antiseptic solution.)(vii)One (200 ml) bottle of mercurochrome (2%) solution in water.(viii)One (120 ml) bottle of salvolatile having the dose and mode of administration indicated on the label.(ix)One pair scissors.(x)One roll of adhesive plaster (6 cm x 1 m).(xi)Two rolls of adhesive plaster (2 cm x 1 m).(xii)Twelve pieces of sterilised eye pads in separate sealed packets.(xiii)A bottle containing 100 tablets (each of 325 mg) of aspirin or any other analgesic.(xiv)One polythene wash bottle (500 cc) for washing eyes.(xv)Twelve roller bandages 10 cm wide.(xvi)Twelve roller bandages 5 cm wide.(xvii)Six triangular bandages.(xviii)One tourniquet.(xix)A supply of suitable splints.(xx)Two packets of safety pins.(xxi)Kidney tray.(xxii)A snake-bite lancet.(xxiii)One (30 ml) bottle containing potassium permanganate crystals.(xxiv)One copy of first-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institute. Govt. of India, Bombay.Provided that items (xiv) to (xxi) inclusive, need not be included in the standard first-aid box or cupboard (a) where there is a properly equipped ambulance room, or (b) if at least one box containing such items is placed and maintained in accordance with the requirements of Section 45 of the Act, or is separately provided.(d)In lieu of the dressings required items (i) and (ii), there may be substituted adhesive wound dressings approved by the Chief Inspector and other equipment or medicines that may be considered essential and recommended by the Chief Inspector from time to time." ;]Rule prescribed under sub-section (4) of section 45 and section 112.

## 66. Ambulance room.

(1)Every ambulance room shall be under the charge of at least one wholetime qualified medical practitioner (hereinafter referred to as medical officer) assisted by at least one qualified nurse or dresser-cum-compounder and one nursing attendant in each shift;Provided that where a factory works in more than one shift, the Chief inspector, if he is satisfied that on account of the size of the factory, nature of hazards or frequency of accidents, it is not necessary to employ a whole-time medical officer for each shift separately, may. with the previous approval of the State Government grant exemption from the provisions of this sub-rule and permit employment of only one whole-time medical officer for more than one or all shifts subject to the conditions that-(a)there shall be no relaxation in respect of nursing staff; and(b)the medical officer shall be readily available on call during the working hours of the factory.Note: If it appears to the Chief Inspector of Factories that in

any factory the provision of breathing apparatus is necessary he may by order in writing require the occupier to provide suitable breathing apparatus in addition to the equipment for light trailer pump or large trailer pump. as the case may be. The Chief Inspector may by an order in writing exempt a factory or part of it from all or any of the provisions of this rule to such extent and on such conditions as may be deemed necessary. (2) [Amendment vide Notification No. 1008 L.W. dated 20th August 1964.] The ambulance room [\* \* \*] [Omitted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.] shall be separate from the rest of the factory and shall not be situated in close proximity to any part of the factory in which noisy processes are carried on. Plan and site plan in duplicate, of the building, to be constructed or adopted, as the ambulance room [\* \* \*] [Omitted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April 1986.] shall be submitted for the approval of the Chief Inspector. The ambulance room shall have smooth, hard impervious floor and walls impervious up to a height of 1.5 metres and shall be adequately ventilated and lighted by both natural and artificial means. It shall be used only for the purpose of first-aid treatment and rest. [The ambulance room shall have a floor area of at least [Vide Notification No. 2049-L.W./L.W./IR-12/68 dated 24th Oct, 1968.] [24] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] sq. metres. The height of every room in the building constructed or taken into use as ambulance room after 1st January, 1965, shall be not less than 3.65 metres from the floor level to the lowest part of the roof and there shall be attached at least one latrine and one urinal of sanitary type. Suitable beds shall be provided for rest. An adequate supply of whole time drinking water shall be laid on and the room shall contain at least :- (i) A glazed sink with hot and cold water always available. (ii) A table with a smooth top at least [180cm x 105 cm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (iii) Means for sterilizing instruments. (iv) A couch. (v) Two stretchers. (vi) Two buckets or containers with close fitting lids. (vii) Two rubber hot water bags. (viii) A kettle and a spirit stove or other suitable means of boiling water. (ix) Twelve plain wooden splints [900mm x 100mm x 6 mm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (x) Twelve plain wooden splints [350 mm x 75 mm x 6 mm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xi), Six plain wooden splints [250mm x 50mm x 12 mm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xii) Six woolen blankets. (xiii) [Three] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] pair artery forceps. (xiv) One bottle of [spiritus ammoniac aromaticus (120ml).] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xv) Two medium size sponges. (xvi) Six hand towels. (xvii) Four "Kidney" trays. (xviii) Four cakes [of toilet, preferably antiseptic soap] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xix) Two glass tumblers and two wine glasses. (xx) Two clinical thermometers. (xxi) Graduated measuring glass with teaspoon. (xxii) [One wash bottle (1000 cc) for washing eyes] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xxiii) [Two graduated (120 ml) measuring glasses. [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]. (xxiv) Two minimum measuring glasses. (xxv) Three chairs. (xxvi) One Screen. (xxvii) One electric hand torch. (xxviii) Four first aid box or cupboards stocked to the standard prescribed under item (c) of rule 65]. (xxix) An adequate supply of anti-tetanus toxoid. (xxx) Injections-morphia, perhidine, atropine, adrenaline, coramine, novacan (six each). (xxxi) Coramine liquid (60 ml). (xxxii) Tablets Anti histamanic and antispasmodic (25 each) (xxxiii) Syringes with needles 2cc, 5cc, 10cc, and 50 cc. (xxxiv) Three surgical scissors. (xxxv) Two needle holders, big and small. (xxxvi) Suturing needles and materials. (xxxvii) Three dissecting forceps. (xxxviii) Three dressing forceps. (xxxix) Three



scalpels.(xl)One Stethoscope.(xli)Rubber bandage Pressure bandage.(xlii)Oxygen cylinder, with necessary attachments.(2A)[ No medical officer shall be required or permitted to do any work which is inconsistent with or detrimental to his responsibilities under this rule.] [Inserted by Notification No. No.340 L.W./L.W./IR-4/85 dated 2nd April 1986.](3)The occupier of every factory to which these rules apply shall, for the purpose of removing serious cases of accident or sickness, provide in the premises and maintain in good condition a suitable conveyance unless he had made arrangements for obtaining such a conveying from a hospital.(4)A record of all cases of accident and sickness treated in the room shall be kept and produced to the inspector or Certifying Surgeon when required.[Rule prescribed under section 112 read with sub-sections (3) and (4) of section 45.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991]

## 66A. Notice regarding first aid appliance

(1)A notice containing the names of the persons working within the factory and who are trained in first air treatment and are in charge of the first aid boxes or cupboards and the names Of their work places shall be displayed conspicuously near each such box or cupboard.(2)In case of an ambulance room, the notice under sub-rule (1) shall further indicate the name, address and telephone number of the medical practitioner in charge and it shall be displayed conspicuously at or near the main entrance to the ambulance room,Rules 67 to 72 prescribed under [Section 46 and 112] [Substituted by ibid]

## 67. Canteens.

(1)The occupier of every factory wherein more than two hundred and fifty workers are ordinarily employed shall be provided in or near the factory an adequate canteen according to the standards prescribed in these rules.(2)[\*\*\*] [Omitted by the West Bengal Factories (Amendment) Rules, 1991](3)The canteen building shall be situated not less than 4. Substituted by ibid[15] metres from any latrine, urinal, boiler house, coal stacks, ash dumps and any other source of dust, smoke or obnoxious fumes :Provided that the Chief Inspector may in any particular factory relax the provisions of this sub-rule to such extent as may be reasonable in the circumstances and may require measures to be adopted to secure the essential purpose of this sub-rule.(4)The canteen building shall be constructed in accordance with the plans approved by the Chief Inspector and shall accommodate at least a dining hall, kitchen, store room,pantry and washing places separately for workers and for utensils:Provided that the Chief Inspector may, in the case of factories existing on the date of commencement of these rules relax the provisions of this sub-rule to such extent as he considers reasonable.(5)The height of every room in the building shall not be less than [360 cm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] from the floor level to the lowest part of the roof. The floor and inside walls up to a height of [120cm] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] from the floor shall be made of smooth and impervious material:Provided that in the case of factories existing on the date of commencement of these rules the Chief Inspector may by order in writing relax the provisions of this sub-rule, regarding height.(6)The doors and windows of a canteen building shall be of flyproof construction and shall allow adequate ventilation.(7)The canteen shall be sufficiently lighted at all times when any persons have access to it.(8)(a)In every canteen -(i)all inside walls of rooms and all ceilings and passages and

staircases shall be lime-washed or colour-washed at least once in each year or painted once in three years dating from the period when last lime-washed, or painted, as the case may be;(ii)all wood work shall be varnished or painted once in three years dating from the period when last varnished or painted;(iii)all internal structural iron or steel work shall be varnished or painted once in three years dating from the period when last varnished or painted:Provided that inside walls of the kitchen shall be lime-washed once in every four months.(b)Records of dates on which lime-washing, colour-washing, varnishing or painting is carried out, shall be maintained in the prescribed Register (Form No.6).(9)The canteen building shall be maintained in a clean and hygienic condition and its precincts shall be maintained in a clean and sanitary condition. Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance. Suitable arrangement shall be made for the collection and disposal of garbage.

## **68. Dining Hall.**

(1)The dining hall shall accommodate at a time at least 30 per cent. Of the workers at a time:Provided that in any particular factory or in any particular class of factories, the Chief Inspector may, by an order in writing in this behalf, alter the percentage of workers to be accommodated.(2)The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs, shall be not less than 0.93 sq.metres per dinner to be accommodated as prescribed in sub-rule (1).(3)A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number. Washing places for women shall be separate and screened to secure privacy.(4)Sufficient tables, with impervious tops, chairs or benches shall be available for the number of dinners to be accommodated as prescribed in sub-rule (1).

## **69. Equipments.**

(1)There shall be provided and maintained sufficient utensils, crockery, cutlery, furniture and any other equipment necessary for the efficient running of the canteen. Suitable clean clothes for the employees serving in the canteen shall also be provided and maintained.(2)The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter, if provided, shall have a top of smooth and impervious material. Suitable facilities including an adequate supply of hot water shall be provided for cleaning of utensils and equipment.

## **70. Prices to be charged.**

(1)Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee:[Provided that where a canteen is managed by Workers' Co-operative Society, the prices to be charged may include a margin of profit upto a maximum of five percent of its working capital subject to its approval by Canteen Managing Committee.] [Added by the West Bengal Factories (Amendment) Rules, 1991](1A)[ In computing the prices referred to in sub-rule (1) the following items of expenditure shall not be taken into consideration, but shall be borne by the occupier:-(a)the rent for the land and building;(b)the depreciation and maintenance charges of the building and equipment provided for

the canteen;(c)the cost of purchase, repairs and replacement of equipment including furniture, crockery, cutlery and utensils,(d)the charges and expenses for providing water, lighting and ventilation,(e)the interest on the advance paid for running the canteen and on the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen;(f)the cost of fuel or electricity required for cooking or heating of food-stuff or water;(g)any payment, wages or otherwise, made to the employees employed for running the canteen and the cost and washing charges of uniforms provided to them; and(h)any other expenditure which is not related to the actual cost incurred in procuring and purchasing food stuff, beverages and other items to be served in the canteen.](2)The charges per portion of foodstuff, beverages and any other items served in the canteen shall be conspicuously displayed in the canteen.

## **71. Accounts.**

(1)All books of account, registers and any other documents used in connection with the running of the canteen shall be produced on demand to an Inspector.(2)The accounts pertaining to the canteen shall be audited once in every twelve months, by registered accountants and auditors. The balance sheet prepared by the said auditors shall be submitted to the Canteen Managing Committee not later than two months after the closing of the audited accounts:Provided that the accounts pertaining to the canteen in a Government factory having its own Accounts Department, may be audited by such Department:[Provided further that where the canteen is managed by a co-operative society registered under the Co-operative Societies Act, the account pertaining to such canteen shall be audited in accordance with the provisions of the said Act.] [Added by the West Bengal Factories (Amendment) Rules, 1991]

## **72. Managing Committee.**

(1)The manager shall consult the Canteen Managing Committee from time to time as to-(a)the quality and quantity of foodstuffs to be served in the canteen;(b)the arrangement to the menus;(c)times of meals in the canteen; and(d)any other matter as may be found necessary for the purpose of efficient administration of the canteen.(2)The Canteen Managing Committee shall consist of an equal number of person nominated by the manager and elected by the workers. The number of elected worker shall be in the proportion of 1 for every 1,000 workers employed in the factory, provided that in no case shall there be more than 5 or less than 2 workers on the Committee.(3)The manager shall determine and supervise the procedure for election to the Canteen Managing Committee.(4)A Canteen Managing Committee shall be dissolved by the manager two years after the last election, no account being taken of a by-election.Rule prescribed under section 47 [and section 112] [Added by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April, 1986.] [Inserted by Notification no. 340 L.W./L.W./IR-4/85 dated 2nd April, 1986.]

## **73. Shelters, rest rooms and lunch rooms.**

- [(1) The shelter, or rest rooms and lunch rooms shall conform to the following standards [x x x] [Rule 73 renumbered as Sub-Rule (1) by the West Bengal Factories (Amendment) Rules 1991](a)The building shall be soundly constructed and all the walls and roof shall be of suitable heat resisting

materials and shall be water-proof. The floor and walls to a height of 91 cm. shall be so laid or furnished as to provide a smooth, hard and impervious surface.](b)[ [Omitted by ibid] (i) The building shall accommodate at 'a time at least 10 percent, of the workers working at a time:Provided that, in particular factory or in any particular class of factories, the Chief Inspector may, by an order in writing in this behalf, alter or relax the percentage of workers to be accommodated.(ii)The height of every room in the building shall be not less than 3.65 metres from floor level to the lowest part of the room, and there shall be at least 9.93 sq.metres of floor area for every worker to be accommodated as prescribed in clause (b) (i). [Vide Notification No. 1008 L.W., dated 20th August, 1964.](c)Effective and suitable provision shall be made in every room for securing and maintaining adequate ventilation by the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting.(d)Every room shall be adequately furnished with chairs or benches with back-rests.(e)Sweepers shall be employed whose primary duty is to keep the rooms, building and precincts thereof in a clean and tidy condition.(e)Sweepers shall be employed whose primary duty is to keep the rooms, building and premises thereof in a clean and tidy condition.[Inserted by the West Bengal Factories (Amendment) Rules, 1991](f)[ Suitable provisions shall be made in every room for supply of drinking water and facilities for washing:](2)[ The lunch rooms shall-(a)conform to the requirements laid down in clauses (a) to (1) of sub-rule (1) and(b)be provided with adequate number of tables with impervious tops for the use of the workers for taking food.]Rule 74 to 77 prescribed under sub-section (3) of section 48 [and section 112] [Inserted by the West Bengal Factories (Amendment) Rules, 1991] [Inserted by the West Bengal Factories (Amendment) Rules, 1991]

## 74. Crèches

(1)The creche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonable practicable it shall not be situated in close proximity to any part of the factory where obnoxious fumes, dust or odours are given off or in which excessively noisy processes are carried on. Plan and site plan, in duplicate, of the building to be constructed or adopted, shall be submitted for the approval of the Chief Inspector.(2)The building in which the crèche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be water-proof. The floor and internal walls up to a height of 1.22 metres from the floor of the crèche shall be so laid or finished as to provide a smooth impervious surface.(3)The height of the rooms in the building shall be not less than 3.65 metres from the floor to the lowest part of the roof and there shall be not less than 1.86 sq.metres of floor area for each child to be accommodated.(4)Effective and suitable provisions shall be made in every part of the crèche for securing and maintaining adequate ventilation by the circulation of fresh air.(5)The crèche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child (provided that for children over two years of age it will be sufficient if suitable bedding is made available), at least one chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child, and a sufficient supply of suitable toys for the older children.(6)A suitably fenced and shady open air play-ground shall be provided for the older children. Provided that the Chief Inspector may by order in writing exempt any factory from compliance with this sub-rule if he is satisfied that there is not sufficient space available for the provision of such a play-ground.

## **75. Wash room.**

- [(1)] [Renumbered Substituted Rule (1) by the West Bengal Factories (Amendment) Rules, 1991.] There shall be in or adjoining the crèche a suitable wash room for the washing of the children and their clothing. The wash room shall conform to the following standards.(a)The floor and internal walls of room to a height of 91 cm. shall be so laid or furnished as to provide a smooth impervious surface. The room shall be adequately lighted and ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition.(b)There shall be at least one basin or similar vessel for every four children accommodated in the crèche at one time together with a supply of water provided, if practicable, through taps at the rate of at least 23 litres per child per day.(c)An adequate supply of clean cloths, soap and clean towels shall be made available for each child while it is in the crèche.(2)[ Adjoining the wash room referred to in sub-rule (1), a latrine, shall be provided or the sole use of the children accommodated in the crèche. The design of the latrine and the scale of accommodation to be provided shall be approved by the Public Health Engineering Directorate, West Bengal.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991]

## **76. Supply of milk and refreshment.**

- At least  $\frac{1}{4}$  litre of clean pure milk shall be available for each child on every day it is accommodated in the crèche and the mother of such a child shall be allowed in the course of her daily work 2 intervals of at least 15 minutes each to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment.

## **77. Clothes for crèche staff.**

- The crèche staff shall be provided with suitable clean clothes for use while on duty in the crèche.Rule prescribed under section 50 read with section 48

## **77A. [ Exemption from the provisions of crèche. [Inserted by the West Bengal Factories (Amendment) Rules, 1991]**

(1)In a factory where the number of married women or widows employed does not exceed 15, or where the factory works for less than 180 days in a calendar year, or where number of children kept in the crèche was less than 5 in the preceding year, the Chief Inspector may exempt such a factory from the provisions of section 48 of the Act and the rules 74 to 77 made thereunder if he is satisfied that alternate arrangements as stipulated under sub-rule (2) are provided by the factory.(2)The alternate arrangements as stipulated in sub-rule (1) shall include a crèche building which shall have a minimum accommodation at the rate of 186 square metres per child and be provided with-(a)suitable wash-room for washing of the children and their clothing.(b)adequate supply of soap and clean towels and clothes; and(c)adequate number of female attendants who are provided with suitable clean clothes for use while on duty to look after the children of the crèche.(3)The exemption granted under sub-rule (1) may be revoked by the Chief Inspector after causing an enquiry, in case of breach of this rule committed by the factory.] [Substituted by W. B. Factories

(Amendment) Rules, 1991 dated 27.11.1991]

## **Chapter VI**

### **Working Hours of Adults**

Rule prescribed under sub-section (2) of section 53.

#### **78. Compensatory holidays.**

(1) Except in the case of workers engaged in any work which for technical reasons must be carried on continual throughout the day, the compensatory holidays to be allowed under sub-section (1) of section 53 of the Act shall be so spaced that not more than two holidays are given in one week. (2) The Manager of the factory shall display, on or before the end of the month in which holidays are lost, a notice in respect of workers allowed compensatory holidays during the month in which they are due or the two subsequent months and of the dates thereof, at the place at which the notice of periods of work prescribed under section 61 is displayed. Any subsequent change in the notice in respect of any compensatory holiday shall be made not less than three days in advance of the date of that holiday. (3) No worker shall be discharged or dismissed before he has been given compensatory holidays to which he may be entitled and no such holiday or holidays shall be reckoned as part of any period of notice required to be given before discharge or dismissal. (4) (a) The Manager shall maintain a Register as nearly as possible in Form No.10: Provided that if the Chief Inspector of Factories is of the opinion that any muster roll or register maintained as part of the routine of the factory or return made by the Manager, gives in respect of any or all of the workers in the factory the particulars required for the enforcement of section 53, he may, by order in writing, direct that such muster roll or register or return shall, to the corresponding extent, be maintained in place of, and be treated as, the register or return required under this rule for that factory. (b) The register maintained under clause (a) shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand. Rule prescribed under sub-section (4) of section 59.

#### **79. Cash equivalent.**

- The cash equivalent of the advantage accruing through the concessional sale to a worker of foodgrains and other article shall be computed at the end of every wage period fixed under the provisions of the Payment of Wages Act, 1936. Rules prescribed under sub-section (5) of section 59 and section 112.

#### **80. Manner of computing cash equivalent; overtime slips and muster roll.**

(1) For the purpose of computing cash equivalent of the advantage accruing through the concessional sale to a worker of foodgrains and other articles, the difference between the value of food grains and other articles at which these were purchased by the factory and the value of foodgrains and other articles supplied at concessional rates shall be calculated and allowed for the number of overtime

hours worked. This sub-rule shall not apply to any Railways factories whose alternative method of computation has been approved by the State Government. (2) The Manager of every factory in which workers are exempted under section 5, 64, 65 or 86 from the provisions section 51 or section 54 shall keep a muster-roll as nearly as possible in Form No.11 showing the normal piecework rate of pay or rate of pay per hour of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefore of all exempted workers. The muster-roll (Form No.11) shall always be available for inspection. All entries shall be made in ink and the muster roll shall be preserved for three calendar years, after the last entry in it. (3) [ Period of overtime work shall be entered in overtime slips, in duplicate, a copy of which duly signed by the Manager or by a person duly authorized by him, shall be given to the worker, immediately after completion of the overtime work.] [Vide Notification No. 1008 L.W., dated 20th August 1964.] Rule prescribed under section 60.

### **81. Employment in two factories on the same day.**

- An adult worker employed in one factory may work on the same day in one or more other factories, provided that-(a)he does not thereby change his employer;(b)unless working under the provisions of rule providing for the exemption of workers engaged on urgent repairs made under clause (a) of sub-section (2) of section 64, he does not work for longer periods or for more hours than he might legally have worked in the factory in which he is employed;(c)any time spent in travelling between one factory and another shall be deemed to be time during which he has worked; and(d)in computing any pay due to the worker for overtime the total of all hours worked by him in any factory, including any time necessarily spent in travelling between one factory and another, shall be deemed to be the total hours worked by him on that day. Notice prescribed under sub-section (8) of section 61.

### **82. Notice of periods of work for adults.**

- The notice of periods of work for adult workers shall be as nearly as possible in Form No.12, Form No.12A or Form No.12B as the case may be. Register prescribed under sub-section (2) of section 62.

### **83. Register of adult workers.**

- The Register of adult workers shall be as nearly as possible in Form No. 13 and shall be maintained in accordance with the following provisions :-(1)For each group of workers classified under section 61, a separate part of the register shall be maintained.(2)Where a worker is transferred from one group to another or from one relay to another, the following particulars of his transfer shall be entered against his name:-(a)Under the group from which he has been transferred(i)the date and actual time of finishing work in the group or relay, and(ii)the group or relay to which he has been transferred, and(b)under the group to which he has been transferred.(i)the date and actual time of commencing work in the group or relay, and(ii)the group of relay from which he has been transferred.(3)Where a worker is discharged from or leaves his employment, the date of his leaving or discharge, as the case may be, shall be entered against his name in the "remarks" column.(4)All entries in the registers shall be made in ink, shall be legible and shall be maintained

up-to-date.(5)All registers shall be maintained in English and all dates entered In a register shall be in accordance with the English calendar.(6)All register for the preceding three calendar years shall be preserved and be available in the factory for examination by the Inspector.

## **Chapter VII**

### **Employment of Young Persons and Exclusion of Under Age: Children**

Notice prescribed under sub-section (3) of section 72.

#### **84. Notice of periods of work for children.**

- The Notice of periods of work for child workers shall be as nearly as possible in Form No.12, Form No.12A, or Form No.12B as the case may be.Register prescribed under sub-section (2) of section 73.

#### **85. Register of child workers.**

- The Register of child workers shall be as nearly as possible in Form No.14 and shall be maintained in accordance with the following provisions:-(1)For each group of children classified under section 61, a separate part of the register shall be maintained.(2)Where a child is transferred from one group to another, or from one relay to another the following particulars of his transfer shall be entered against his name:(a)Under the group from which he has been transferred-(i)the date and actual time of finishing work in the group or relay, and(ii)the group or relay to which he has been transferred, and(b)under the group to which he has been transferred(i)the date and actual time of commencing work in the group or relay, and(ii)the group or relay from which he has been transferred.(3)Where a child is discharged from or leaves his employment, the date of his leaving or discharge, as the case may, shall be entered against his name in the "remarks" column.(4)All entries in the registers shall be made in ink, shall be legible, and shall be maintained up-to-date.(5)All registers shall be maintained in English and all dates entered in a register shall be in accordance with the English calendar.(6)All registers for the preceding three calender years shall be preserved and be available in the factory for examination by the Inspector.Rule prescribed under section 112.

#### **86. Exclusion of underage children.**

- No child under the age of 14 years shall be permitted within the workroom and godowns of any factory at any time during which work is carried on.

## **Chapter VIII**

### **Rule prescribed under section 80.**



## **87. Cash equivalent.**

- The cash equivalent of the advantage accruing through the concessional sale of foodgrains and other articles payable to a worker proceeding on leave shall be the difference between the value of foodgrains and other articles at which these were purchased by the factory and the value at the concessional rates of foodgrains and other articles to which he is entitled. Rule 88 to 93A prescribed under section 83 And 112.

## **88. Leave with Wages Register**

(1) The Manager shall keep an up-to-date Register as nearly as possible in Form No.15 hereinafter called the Leave with Wages Register: Provided that if the Chief Inspector is of the opinion that any muster-roll or register maintained as part of the routine of the factory, or return made by the Manager, gives, in respect of any or all of the workers in the factory, the particulars required for the enforcement of Chapter VIII of the Act, he may, by order in writing, direct that such muster-roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register or return required under the Rule in respect of that factory. (2) The Leave with Wages Register shall be preserved for a period of three years after the last entry in it shall be produced before the inspector on demand.

## **89. Leave Book.**

(1) Manager shall provide each worker with a book as nearly as possible in Form No.16 (hereinafter called the Leave Book). The Leave Book shall be the property of the worker and the Manager or his agent shall not demand it except to make relevant entries therein whenever necessary and shall not keep it for more than a week at a time. All entries in the Leave Book shall be made in ink, shall be legible, and shall be maintained up-to-date. (2) If a worker loses his Leave Book, the Manager shall provide him with another copy on the payment of six paise, and shall complete it from his record.

## **90. Medical Certificate.**

- If any worker is absent from work due to his illness and wants to avail himself of the leave with wages due to him to cover the whole or part of the period of his illness, under the provisions of sub-section (7) of section 79, he shall, if required by the Manager, produce a medical certificate signed by a registered medical practitioner or by a registered or recognised vaid or hakim stating the cause of the absence and the period for which the worker is in the opinion of such medical practitioner, vaid or hakim unable to attend his work.

## **91. Notice of Inspector of lay off or closure.**

- The occupier or manager of every factory shall give to the Inspector a notice of every case of lay off as soon as possible, and of every intended closure of the factory or any section or department thereof, immediately after the closure of the factory or any section or department thereof,

immediately after the closure is decided upon, stating the reason for the lay off or closure, the number of workers working in the factory, section or department, as the case may be, on the date of the notice, the number of workers on lay off or likely to be unemployed on account of the closure and the possible period of the closure.+ Inserted by Amendment by Rules, 1991.[Information as to the particulars and quantity of stored chemicals and action taken or proposed to be taken to ensure safety from those chemicals while in storage during such closure shall also be furnished alongwith the report of intended closure.]. The occupier or manager shall also send a working again, stating the number of workers employed Entries to this effect shall be made in the leave with Wages Register and the Leave Book in respect of each worker concerned.

## **92. Notice of leave with wages.**

(1)In a factory where leave scheme has been drawn up in accordance with sub-section (1) and (9) of section 79 of the Act. the Manager shall, by a notice displayed at the place at which the notice of the periods of work required by section 61 is displayed, fix the dates on which leave with wages shall be allowed to each worker or group of workers including any worker who has accumulated his leave. This date shall not, in an individual case, be earlier than two weeks from the date of notice unless the worker agrees to take the leave earlier. The necessary entries shall be made in the Leave with Wages Register and the Leave Book of the worker concerned.(2)As far as circumstances permit, members of the same family, comprising husband, wife and children shall be allowed leave on the same date.(3)The manager may alter the dates fixed for leave only after giving notice of two weeks to the workers.(4)A worker may exchange the period of his leave with another worker, subject to the approval of the manager.

## **93. Payment of wages if the worker dies.**

(1)if a worker dies before availing himself of leave with wages due to him, his leave pay shall be paid to his [nominee] [Substituted by *ibid.*] within one week of the receipt of intimation of the death of the worker. [For this purpose each worker shall submit a nomination in Form 16A duly signed by himself and attested by two witnesses. The nomination shall remain in force until it is cancelled or revised by another nomination] [Inserted by *ibid.*](2)Where an exemption is granted under Section 84 of the Act, a copy of the order shall be fixed with the Registers and other records as are required to be maintained under the rules or as permitted by the order to show the position of relevant particulars of each worker as regards leave due, leave taken and wages granted etc. which are more favourable and permitted by the order.(3)A notice giving full details of the system established in the factory for leave with wages or as permitted by the order shall be displayed conspicuously at or near the main entrance to the factory and a copy thereof submitted to the Inspector.(4)No alteration shall be made in the scheme, permitted by the order under section 84 of the Act, without previous sanction of the State Government] [Inserted by *ibid.*]

## **Chapter IX**

### **Special Provisions**

Rule prescribed under section 87

## 94. Dangerous operation.

(1)[The following manufacturing process or operation] [Substituted Rules (2) (3) & (4) rule 93 inserted by the West Bengal Factories Amendment Rules, 1991 and Rules 93] when carried on in any factory are declared to be dangerous [\*\*\*] [Omitted by ibid.] under section 87.(a)Manufacture of aerated water and processes incidental thereto.(b)Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds.(c)Manufacture or repair of electric accumulators.(d)Glass manufacture.(e)Grinding or glazing of metals.(f)Manufacture, treatment or handling of lead, lead alloy or certain compounds of lead.(g)[[Vide Notification No. 1008 L.W. dt. 20th August. 1964] Generation of gas from dangerous petroleum.(h)Cleaning or smoothing of articles by a jet of sand, metal shot or grit of other abrasive propelled by a blast of compressed air or steam.(i)Liming and tanning of raw hides and skins and process incidental thereto.(j)Feeding of jute, hemp or other fibres into softening machine(k)Lifting, stacking, storing and shipping of bales in and from finished goods godowns of Jute Mills.(l)Manufacture, use or storage of cellulose solution(m)Manufacture of chromic acid or manufacture or recovery of the bichromate of sodium, potassium or ammonium.(n)Printing presses and Type Foundries and certain lead process carried on therein.(o)[ Compression of hydrogen and oxygen produced by electrolysis of water.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991](p)Manufacture of pottery.(q)Manufacture of rayon by the viscose process.(r)Manufacturing process and process incidental thereto carried out in chemical works mentioned in Appendix I of Schedule XVIII.(s)[[Vide Notification No.1211-L.W/LR-1/67 dated 14th June 1967] Manufacture, manipulation or storage of celluloid or any article, wholly or partly, made of celluloid.(t)[[Vide Notification No.143-I.W/IR-3/75 dated 9th February, 1976] Manufacture, handling or use or use of benzene.(u)[ Process of extracting oils and fats from vegetable and animal sources in solvent plants. [Added by Notification No.340 L.W/L.W./IR-4/85 dated 2nd April 1986](v)Manufacture or manipulation of manganese and its compounds.(w)Manufacture or manipulation of dangerous pesticides.(x)Manufacture or manipulation of carcinogenic intermediates.(y)Handling and processing of asbestos, manufacture of any article of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form.](z)[ Manipulation of stones or any material containing free silica. [Inserted by the West Bengal Factories (Amendment) Rules, 1991.](aa)Manufacture, handling or manipulation of corrosive substances.(bb)Manufacturing process or operations in carbon disulphine plants.(cc)Operations involving high noise level.(dd)Manufacture, handling, manipulation, storage of and operations using highly flammable liquids and flammable compressed gases.(ee)Operation in foundries;](2)The provision specified in the Schedule annexed to this rule shall apply to factories wherein[manufacturing process or] [Vide Notification no. 1211-L.W./IR-1/67 dated 14th June 1967.] operations specified in such schedules are carried out.(3)[ "First employment" means employment for the first time in a hazardous process or operation so notified under Section 87 of the Act, or re-employment therein after cessation of employment in such process or operation for a period exceeding three calendar months.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.]

I

Manufacture of aerated Water and Processes incidental thereto

**1. Fencing of Machines. - All machines for filling bottles or syphons shall be so constructed, placed or fenced, as to prevent, as far as may be practicable, a fragment of bursting bottle or syphon from striking any person employed in the factory.**

**2. Face-guards and gauntlets. - (1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or syphons-**

(a)suitable face guards to protect the face, neck and throat; and(b)suitable gauntlets for both arms to protect the whole hand and arms.Provided that-(i)Paragraph 2(1) shall not apply where bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape; and(ii)Where a machine is so constructed that only one arm of the bottle at work upon it is exposed to danger. a gauntlet need not be provided for the arm which is not exposed to danger.(2)The occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, screwing, wiring, foiling, capsuling, sighting or labelling bottles or syphons-(a)suitable face-guard to protect the face, neck and throat; and(b)suitable gauntlets for both arms to protect the arm and at least half of the arms and the space between the thumb and forefinger.

**3. Wearing of face-guards and gauntlets. - All persons engaged in any of the processes specified in paragraph 2 shall, while at work in such processes, wear the face-guards and gauntlets provided under the provisions of the said paragraph.**

[Schedule II [Schedule II, Substituted by the West Bengal Factories (Amendment) Rules, 1991]Electrolytic plating or oxidation, of metal articles by use of an electrolyte containing bases or salts of metals such as chromium, nickel, cadmium. zinc, copper, silver, gold etc.

**1. Definitions. - For the purposes of this Schedule**

(a)"electrolytic process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing acids. bases or salts or metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc;(b)"bath" means any vessel used for an electrolytic process or for any subsequent process; and(c)"employed" means employed in any process involving contact with liquid from a bath.

**2. Exhaust draught: - An efficient exhaust draught shall be applied to every vessel in which an electrolytic process is carried on. Such draught shall be provided by mechanical means and shall operate on the vapour or spray given off in the process as near as may be at the point of origin. The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.**

**3. Prohibition relating to women and young person: - No women, adolescent or child shall be employed or permitted to work at a bath.**

**4. Floor of workrooms: - The floor of every workroom containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.**

**5. Protective devices: - (1) The occupier shall provide and maintain in good and clean condition the following articles of protective devices for the use of all workers employed on any process at which they are liable to come in contact with liquid from a bath and such devices shall be worn by the workers concerned-**

(a)waterproof aprons and bibs; and(b)for workers actually working at a bath, loose fitting rubber gloves and rubber boots or other waterproof footwear, and chemical goggles.(2)The occupier shall provide and maintain for the use of all workers employed suitable accommodation for the storage and drying of the protective devices.

**6. Washing facilities: - (1) There shall be provided and maintained in good repairs for the use of all workers employed in electrolytic process and processes incidental to it-**

(a)a wash place under cover, with either(i)a trough with a smooth impervious surface fitted with a waste pipe, and of sufficient length to allow at least 60 cms. For every five workers employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 cms. or(ii)at least one wash basin for every five such workers employed at any one time, fitted with a waste pipe and having a constant supply of water laid on; and(b)a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.(2)In addition to the facility stipulated in sub-paragraph (1), an approved type of emergency shower with eye fountain shall be provided and maintained in good working order. Whenever necessary, in order to ensure continuous water supply, storage tank of 1500 litres capacity shall be provided as a source of clean water for emergency use.

**7. Cautionary placard: - A cautionary placard in the form specified below and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.**

Cautionary Notice Electrolytic Plating (1) Chemicals handled in this plant are corrosive and poisonous. (2) Smoking, chewing tobacco, eating food or drinking, in this area is prohibited. No food stuff or drink shall be brought in this area. (3) Some of these chemicals may be absorbed through the skin and may cause poisoning. (4) A good wash shall be taken before meals. (5) Protective devices supplied shall be used while working in this area. (6) Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water. (7) All workers shall report for the prescribed medical tests regularly to protect their own health.

**8. Medical facilities and records of examinations and tests: - (1) The occupier of every factory in which electrolytic processes are carried on shall-**

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspection; (b) provide to said medical practitioner all the necessary facilities for the purpose referred to in clause (a); and (c) maintain a sufficient supply of suitable barrier cream, ointment and impermeable water proof of plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping these substances. In case cyanides are used in the bath, the box shall also contain an emergency cyanide kit. (2) The medical practitioner shall examine all workers before they are employed in electrolytic processes. Such examination in case of chrome plating shall include inspection of hands, forearms and nose and shall be carried out once at least in every fortnight. (3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**9. Medical examination by the Certifying Surgeon: - (1) Every worker employed in the electrolytic processes shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include X-ray of the chest and-**

(a) in case of chromium plating include examination for nasal septum perforation and test for chromium in urine; (b) in case of nickel plating, test for nickel in urine; and (c) in case of cadmium plating, test for cadmium in urine and 13, microglobulin in urine. (2) No worker shall be employed or permitted to work in any electrolytic process unless certified fit for such employment by the Certifying Surgeon within 15 days of his first employment. (3) Every worker employed in the electrolytic process shall be produced for re-examination by a Certifying Surgeon at least once in every year, except in case of the workers employed in cadmium, chromium and nickel plating process for whom this examination shall be once in every six months. Such re-examination shall,

wherever the Certifying Surgeon considers appropriate, include tests as specified under sub-paragraph (1).(4)The certifying Surgeon, after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(5)The Certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(6)If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the electrolytic processes on the ground that continuance therein may involve danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker declared unfit in such circumstances shall be provided with alternate placement facility unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(7)No worker who has been found unfit to work as mentioned in sub-paragraph (6) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

### III

Manufacture or repair of electric accumulators

**1. Savings. - This Schedule shall not apply to the manufacture or repair of electric accumulators or parts thereof not containing lead or any compound of lead; or to repair on the premises, of any accumulator forming part of a stationary battery.**

**2. Definitions. - For the purposes of this Schedule-**

(a)"Lead process" means the melting of lead or any material containing lead casting, pasting, lead burning, or any other work, including trimming or any other abrading or cutting of pasted plates, involving the use, movement or manipulation of, or contact with, any oxide or lead.(b)"Manipulating of raw oxide of lead" means any lead process involving, any manipulation or movement of raw oxides of lead other than its conveyance in a receptacle or by means of an implement from one operation to another.[x x x] [Clause (C) Omitted by the West Bengal Factories (Amendment) Rules, 1991.]

**3. Prohibition relating to women and young persons. - No woman or young person shall be employed or permitted to work in any lead process or in any room in which the manipulation of raw oxide of lead or pasting is carried on.**

**4. Separation of certain processes. - Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another, and from any other process:**

(a) Manipulation of raw oxide of lead; (b) Pasting; (c) Drying of pasted plates; (d) Formation with lead burning ("tacking") necessarily carried on in connection therewith; (e) Melting down of pasted plates.

**5. Air space. - In every room in which a lead process is carried on, there shall be at least 500 cubic feet of air space for each person employed therein, and in computing this air space no height over 4.27 meters shall be taken into account.**

**6. Ventilation. - Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.**

**7. Distance between workers in pasting room. - In every pasting room the distance between the centre of the working position of any paster and that of the paster working nearest to him shall not be less than 1.5 metres.**

**8. Floor of work-rooms. - (1) The floor of every room in which a lead process is carried on shall be**

(a) of cement or similar materials so as to be smooth and impervious to water; (b) maintained in sound condition; (c) kept free from materials, plant, or other obstruction not required for or produced in, the process carried on in the room. (2) In all such rooms other than grid casting shops the floor shall be cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room. (3) In grid casting shops the floor shall be cleansed daily. (4) Without prejudice to the requirements of sub-paragraphs (1), (2) and (3) where manipulation of raw oxide of lead or pasting is carried on, the floor shall also be - (a) kept constantly moist while work is being done; (b) provided with suitable and adequate arrangements for drainage; (c) thoroughly washed daily by means of a hose pipe.

**9. Work-benches. - The work-benches at which any lead process is carried on shall-**

(a) have a smooth surface and be maintained in sound condition; (b) be kept free from all materials or plant not required for, or produced in, the process carried on thereat; and all such work-benches other than those in grid casting shops shall (c) be cleansed daily either after being thoroughly damped or by means of a section cleaning apparatus at a time when no other work is being carried on thereat; and, all such work-benches in grid casting shops, shall - (d) be cleansed daily; and, every



work-bench used for pasting shall-(e)be covered throughout with sheet lead or other impervious material;(f)be provided with raised edges;(g)be kept constantly moist while pasting is being carried on.

**10. Exhaust draught. - The following processes shall not be carried on without the use of an efficient exhaust draught :**

(a)Melting of lead or materials containing lead;(b)Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust into the work-room;(c)Pasting;(d)Trimming, brushing, filing or any other abrading or cutting of pastes giving rise to dust;(e)Lead burning, other than(i)"tacking" in the formation room;(ii)chemical burning for the making of lead lining for cell cases necessarily carried on in such a manner that the application of efficient exhaust is impracticable.Such exhaust draught shall be effected by mechanical means and shall operate on the dust or fume given off as nearly as may be at its point of origin, so as to prevent it entering the air of any room in which persons work.

**11. Fumes and gases from melting pots. - The products of combustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work.**

**12. Container for dross. - A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room, except when dross is being deposited therein.**

**13. Container for lead waste. - A suitable receptacle shall be provided in every work-room in which old plates and waste material which may give rise to dust shall be deposited.**

**14. Racks and shelves in drying room. - The racks or shelves provided in any drying room shall not be more than 2.44 metres from the floor, not more than 61 cm. in width: Provided that as regards rack or shelves set or drawn from both sides the total width shall not exceed 1.22 metres.**

Such racks or shelves shall be cleaned only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.

**15. [ Medical facilities and records of examinations and tests. [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] - (a) The occupier of every factory to which this Schedule applies, shall-**

(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval Of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clauses (i)(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector and it shall be kept readily available for inspection by the Inspector at all time during working of the factory.]

**15A. Medical Examination by Certifying Surgeon. - (a) Every worker employed in lead processes shall be produced for examination by a certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine and haemoglobin content and basophilic stippling of cells. No worker shall be required or allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said processes shall be produced periodically for re-examination by a Certifying Surgeon at least once in every three calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests specified in sub-paragraph (a).(c)The Certifying Surgeon after examining a worker shall issue a Certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17, maintained in the Factory.(d)The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all hours during working of the factory.(e)If at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said person is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(f)No person who has been found unfit to work as mentioned in sub-paragraph (c) shall be required or allowed to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

**16. Protective Clothing. - Protective clothing shall be provided and maintained in good repair for all persons employed in-**

(a)manipulation of raw oxide of lead;(b)pasting;(c)the formation room;and such clothing shall be worn by the persons concerned. The protective clothing shall consist of a waterproof apron and waterproof footwear; and also, as regard persons employed in the manipulation of raw oxide of lead

or in pasting, head coverings. The head coverings shall be washed daily.

**17. Mess-room. - There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room, which shall be furnished with (a) sufficient tables and benches, and (b) adequate means for warming food: Provided that this paragraph shall not apply where a canteen has been provided under the provision of rules 67 to 73.**

The mess-room shall be placed under the charge of a responsible person, and shall be kept clean.

**18. Cloak-room. - There shall be provided and maintained for use of all persons employed in a lead process-**

(a) a cloak-room for clothing put off during working hours with adequate arrangement for drying the clothing if wet. Such accommodation shall be separate from any mess-room; (b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 16.

**19. Washing facilities. - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process-**

(a) A wash place under cover, with either-(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of at least one 61 cm. for every five such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals of not more than 61 cm.; or at least one wash basin for every five such persons employed at any one time. fitted with a waste pipe and plug and having a constant supply of water laid on; (ii) a sufficient supply of soap or other suitable materials renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel for each such worker; and (iii) a sufficient supply of soap or other suitable cleansing material and of nail brushes. (b) There shall in addition be provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector.

**20. Time to be allowed for washing. - Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing, to each person who has been employed in the manipulation of raw oxide of lead or in pasting:**

Provided that if there be one basin or 61 cm. of trough for each such person this paragraph shall not apply.

**21. Facilities for bathing. - Sufficient bath accommodation to the satisfaction of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting, and a sufficient supply of soap and clean towels.**

**22. Food, drink etc., prohibited in work-rooms. - No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any workroom in which any lead process is carried on.**

## **IV**

Glass manufacture

**1. Exemption. - If the Chief Inspector is satisfied in respect of any factory or any class or process that, owing to the special methods of work or the special condition in a factory or otherwise, any of the requirements of this Schedule can be suspended or relaxed with danger to the persons employed therein, or that, the application of this Schedule or any part thereof is for any reason impracticable, he may by certificate in writing authorize such suspension or relaxation as may be indicated in the certificate for such period and on such conditions as he may think fit.**

**2. Definition. - For the purposes of this Schedule -**

(a)"Efficient exhaust draught" means localised ventilation effected by mechanical means for the removal, prevention of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dusts originates.(b)"Lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid, a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five per cent of dry weight of the portion taken for analysis.The method of treatment shall be as follows:-A weight quantity of the material which has been dried at 100°C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent, by weight of hydrogen chloride.This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate.[x x x] [Clause (c) Omitted by West Bengal Factories (Amendment) Rules, 1991]

**3. Exhaust draught. - The following process shall not be carried on except under an efficient exhaust draught or under such other condition as may be approved by the Chief Inspector:-**

(a)The mixing of raw material to form a "batch".(b)The dry grinding glazing and polishing of glass or any article of glass.(c)All processes in which hydrofluoric acid is used or hydrofluoric fumes or ammoniacal vapours are given off.(d)All processes in making or furnace moulds or "pots" including the grinding or crushing of used "pots".(e)All process in involving the use of a dry lead compound.

**4. Prohibition relating to women and young persons. - No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3 or at any place where such operations are carried on.**

**5. Floors and work benches. - The floor and work benches of every room in which a dry compound of lead is manipulated or in which any process is carried on given off silica dust shall be kept moist and shall comply with following requirements-**

The floors shall be-(a)of cement or similar material so as to be smooth and impervious of water,(b)maintained in sound condition; and(c)cleansed daily after being thoroughly spread with water at a time when no other work is being carried on in the room.The work-benches shall-(a)have smooth surface and be maintained in sound condition, and(b)be cleansed daily either apparatus at a time when no other work is being carried on thereat.

**5A. [ Use of hydrofluoric acid. [Inserted by the West Bengal Factories (Amendment) Rules, 1991.] -**

The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid;(a)there shall be inlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room;(b)the floor shall be covered with guittaparcha which shall be kept light and shall slope gently down to a covered drain;(c)The work places shall be so enclosed in projecting hoods that openings, required for bringing in the objects to be treated shall be as small as practicable; and(d)The efficient exhaust draught shall be so contributed that the gas is exhausted downwards]

**6. Storage and transport of Hydrofluoric Acid.**

Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or rubber.

## **7. Food, drink, etc., prohibited in work-rooms.**

No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or work place where in any process specified in paragraph 3 is carried on.

## **7A. [ Blow pipes. [Inserted by the West Bengal Factories (Amendment) Rules, 1991]**

Every glass blower shall be provided with a separate blow pipe bearing the distinguishing mark of the person to whom it is issued and suitable facilities shall be kept readily available to every glass blower for sterilizing his blow pipe.] [Omitted by ibid]

## **8. Protective clothing.**

The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all person employed in the processes specified in paragraph 3 suitable protective clothing, footwear and goggles according to the nature of the work and such clothing, footwear, etc., shall be worn by the persons concerned.

## **9. Washing facilities. - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the processes specified in paragraph 3-**

(a)a wash place with either -(i)a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of at least two feet for every five such person employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 2 feet; or(ii)at least one wash basin for every five such person employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available; and(b)a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleansing material and of nail brushes; and(c)a sufficient number of stand pipes with taps, the number and location of such stand pipes shall be to the satisfaction of the Chief Inspector.

## **10. [ Medical facilities and record of examinations and tests.**

(a)The occupier of every factory to which this Schedule applies, shall-(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector and shall be kept readily available for inspection by the Inspector at all hours during working of the factory.

**11. Medical examinations by Certifying Surgeon - (a) Every worker employed in processes specified in paragraph 2 shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include pulmonary function tests, tests for lead in urine and such other tests as may be directed by the Certifying Surgeon. No worker shall be required or allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the said processes shall be produced periodically for re-examination by a Certifying Surgeon at least once in every twelve calendar months. Such re-examinations shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (a)(c) The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examination carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17, maintained in the factory.(d) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all hours during working of the factory.(e) If, at any time the Certifying Surgeon is of the opinion that worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(f) No person who has been found unfit to work as mentioned in sub-paragraph (e) shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.]

## **V**

Grinding or glazing of metals and processes incidental thereto.

### **1. Definitions. - For the purposes of this Schedule -**

(a) "Grindstone" means a grindstone composed of natural or manufactured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted.(b) "Abrasive wheel" means a wheel manufactured of bonded emery or other abrasive.(c) "Grinding" means the abrasion, by aid of mechanical power, of metal, by means of a grindstone or abrasive wheel.(d) "Glazing" means the abrading, polishing or finishing, by aid of mechanical power, of metal, by means of any wheel, buff, pumice or similar appliance to which any abrading or polishing substance is attached or applied.(e) "Racing" means the turning up, cutting or

dressing of a revolving grindstone before it is brought into use for the first time.(f)"Hacking" means chipping of the surface of a grindstone by a back or similar tool.(g)"Rodding" means the dressing of the surface of a revolving grindstone by the application of a rod, bar or strip of metal to such surface.

**2. Exceptions. - (1) Nothing in this Schedule shall apply to any factory in which only repairs are carried on except any part thereof in which one or more persons are wholly or mainly employed in the grinding or glazing of metals.**

(2)Nothing in this Schedule except paragraph 4 shall apply to any grinding or glazing of metals carried on intermittently and at which a person is employed for more than 12 hours in any week.(3)The Chief Inspector may, by certificate in writing, subject to such condition as he may specify therein, relax or suspend any of the provisions of this Schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.

**3. Equipment for removal of dust. - No racing, dry grinding or blazing shall be performed without -**

(a)a hood or other appliance so constructed, arranged, placed and maintained as substantially to intercept the dust thrown off; and(b)a duct of adequate size, air tight and so arranged as to be capable of carrying away the dust, which duct shall be kept free from obstruction and shall be provided with proper means of access for inspection and cleaning and where practicable, with a connection at the end remote from the fan to enable the Inspector to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and(c)a fan or other efficient means of producing a draught sufficient to extract the dust;Provided that the Chief Inspector may accept any other appliance that is, in his opinion, as effectual for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.

**4. Restriction on employment on grinding operations. - Not more than one person shall at any time perform the actual process of grinding or glazing upon a grindstone, abrasive wheel or glazing appliance;**

Provided that this paragraph shall not prohibit the employment of persons to assist in the manipulation of heavy or bulky articles at any such grindstone, abrasive wheel or glazing appliance.

**5. Glazing - Glazing or other processes, except processes incidental to wet grinding upon a grindstone, shall not be carried on in any room in which wet grinding upon a grindstone is done.**



**6. Hacking and rodding. - Hacking or rodding shall not be done unless during the process either (a) an adequate supply of water is laid on at the upper surface of the grindstone or (b) adequate appliance for the interception of dust are provided in accordance with the requirements of paragraph 3.**

**7. [ Medical facilities and record of examinations and tests. - (a) The occupier of every factory to which this Schedule applies, shall-**

(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**8. Medical examination by Certifying Surgeon. - (a) Every Worker employed in grinding or glazing of metal and processes incidental thereto shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examinations shall include pulmonary function tests and in suspected cases chest X-rays and such other test as may be directed by the Certifying Surgeon. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said processes shall be produced periodically for re-examination by a Certifying Surgeon at least once in every 12 calendar months. Such re-examinations shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (a).(c)The Certifying Surgeon after examination of a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate which shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(d)The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(e)If, at any time, the Certifying Surgeon is of the opinion that worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected is rehabilitated.(f)No person who has been found unfit to work as

mentioned in sub-paragraph (e) shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination again certifies him fit for employment in those processes.]

## **VI**

Manufacture, treatment or handling of lead, lead alloys or certain compounds of lead

**1. Exemption - Where the Chief Inspector is satisfied that all or any of the provisions of this Schedule is not necessary for the protection of the persons employed, he may by certificate in writing exempt any factory from all or any of such provisions, subject to such conditions as he may specify therein.**

### **2. Definitions. - For the purposes of this Schedule -**

(a)"Lead compound" means any compound of lead other than galena which, when treated in the manner described below, yields to an aqueous solution of hydrochloric acid, a quantity of soluble lead compound exceeding, when calculated as lead monoxide, five per cent, of the dry weight of the portion taken for analysis. In the case of paints and similar products and other mixtures containing oil or fat the "dry weight of the material remaining after substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media. The method of treatment shall be as follows -A weighed quantity of the material which has been dried at 100°C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight on an aqueous solution of hydrochloric acid containing 0.25 per cent, by weight of hydrogen chloride. The solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt containing in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate.(b)"Efficient exhaust draught" means localised ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fumes or dust originates.

### **3. Application. - This Schedule shall apply to all factories in which any of the following operations are carried on :**

(a)Work at a furnace where the reduction or treatment of zinc or lead ores is carried on.(b)The manipulation treatment or reduction ashes containing lead, the desilvering of lead or the melting of scrap lead or zinc.(c)The manufacture of handling of solder or alloys containing not less than five per cent of lead.(d)The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead.(e)Handling or mixing of lead tetra-ethyl.(f)Any other operation involving the use of lead compound.(g)The cleaning of work-rooms where any of the operations aforesaid is carried on.

**4. Prohibition relating to women and young persons. - No women or young person shall be employed or permitted to work in any of the operations specified in paragraph 3.**

**5. Requirements to be observed. - No person shall employed. or permitted to work in any process involving the use of lead compounds if the process is such that dust or fume from a lead compound is produced therein, or the persons employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraphs 6 to 41 are complied with.**

**6. Exhaust draught. - Where dust, fume, gas or vapour is produced in the process. provision shall be made for removing them by means of an efficient exhaust draught so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.**

**7. [ Medical facilities and records of examinations and tests. - (a) The occupier of every factory to which this Schedule applies, shall-**

(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector. and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examination and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for Inspection by the Inspector at all times during working of the factory.

**8. Medical examination by Certifying Surgeon - (a) Every worker employed in the process referred to in paragraph 3 shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in blood and urine, ALA in urine, haemoglobin content, stippling of cells and steadiness test. No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said processes shall be produced periodically for re-examination by a Certifying Surgeon at least once in every three calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests specified in sub-paragraph (a).(c)The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The records of examinations and re- examinations carried out shall be entered in the certificates which shall be kept in the custody of the manager of the factory. The record of each examinations

carried out under sub-paragraph (a) and (b), including, the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(d)the certificate of Fitness and the health register shall be kept readily available for inspection by the inspector at all times during working of the factory.(e)If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected is rehabilitated.(f)No person who has been found unfit to work as mentioned in sub-paragraph (e) above shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.]

**9. Food, drinks, etc, prohibited in work-rooms. - No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.**

**10. Protective clothing. - Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the persons employed.**

**11. Cleanliness of work-rooms, tools, etc. - The rooms in which the persons are employed and all tools and apparatus used by them shall be kept in a clean state.**

**12. Washing facilities. - (1) The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of-**

(a)a trough with a smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than two feet; or(b)at least one wash basin for every ten persons employed at any one time fitted with a waste pipe and plug and having a constant supply of clean water; together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels.(2)The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.

**13. Mess-room or Canteen. -** The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking meals. The arrangements shall consist of the use of a room separate from any work-room which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming food, the room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean. : Provided that this paragraph shall not apply wherein a canteen has been provided under rule 67.

**14. Cloak-room. -** The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

## **VII [Vide Notification No. 1008 L.W., dated 20th August, 1964]**

Generation of gas from [\* \* \*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum

**1. Definition. -** [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991]"Petroleum" has the same meaning as in the Petroleum Act, 1934 (30 of 1934).

**2. Prohibition relating to woman and young person. -** No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from [\*\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum is carried on.

**3. Flame Traps. -** The plant for generation of gas from [...] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum and associated piping and fittings shall be fitted with at least two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and all pipes and valves shall be installed and maintained free from leaks.

**4. Generating room or building. -** All plants for generation of gas from [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum erected after the coming into force of the provisions specified in the

**schedule, shall be erected in a well ventilated building (hereinafter referred to as the generation building-completely separate from other buildings. In the case of such plant erected before the coming into force of the provisions specified in this schedule there shall be no direct communication between the room where such plans are erected (hereinafter referred to as the generating room) and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire-resisting materials.**

**5. Fire Extinguishers. - An efficient means of extinguishing flammable liquid fires shall be maintained in an easily accessible position near the plant for generation of gas from [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum.**

**6. Plant to be approved by Chief Inspector. - The design and construction of the plant used for generating gas from [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum shall be approved by the Chief Inspector.**

**7. Escape of [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991] petroleum. -**

Effective steps shall be taken to prevent [\*\*\*] [The word 'dangerous' Deleted by Amendment Rules, 1991 ] petroleum from escaping into any drain or sewer.

**8. Prohibition relating to smoking. - No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generating room or building or in the vicinity thereof, and a warning notice in the language understood by the majority of the workers shall be affixed at the entrance of every generating room or building prohibiting smoking and the carrying of matches, fire or naked light or other means of producing naked light or spark into such room or building.**

**9. Access to [\*] [The word 'dangerous' Deleted by the West Bengal Factories (Amendment) Rules, 1991.] petroleum or container. - No unauthorized person shall have access to any [\*] [The word 'dangerous' Deleted by the West Bengal Factories (Amendment) Rules, 1991.] petroleum or to a vessel containing or having actually contained [\*\*\*] [The word 'dangerous' Deleted by the West Bengal Factories (Amendment) Rules, 1991.] petroleum.**

**10. Electric fittings. - All electric fittings shall be flame-proof construction, shall be maintained in flameproof state, and all electric conductors shall be enclosed in metal conducts.**

**11. Construction of doors. - All doors in the generating room or building shall be constructed to open outwards or to slide, and no door shall be locked or obstructed or fastened in such a manner that it cannot be easily and immediately opened from the inside while gas is being generated and any person is working in the generating room or building.**

**12. Repair of containers. - No vessel that has contained .[\*] [The word 'dangerous' Deleted by the West Bengal Factories (Amendment) Rules, 1991] petroleum shall be repaired in generating room or building, and no repairs to any vessel shall be undertaken unless live steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from [\*] [The word 'dangerous' Deleted by the West Bengal Factories (Amendment) Rules, 1991.] petroleum or inflammable vapour.**

[Schedule VIII [Substituted by the West Bengal Factories (Amendment) Rules, 1991.]Cleaning or smoothing, roughening etc. of articles, by a jet of sand, metal shot or grit or other abrasive propelled by a blast of compressed air or steam.

### **1. Definition. - For the purposes of this Schedule-**

(i)"blasting" means cleaning, smoothing, roughening, or removing of any part of the surface of any article by the use of a jet of sand, metal shot, or grit or other material as an abrasive, propelled by a blast of compressed air or steam;(ii)"blasting enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein;(iii)"blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise; and(iv)"cleaning of casting" where done as an incidental or supplemental process in connection with the making of metal castings, means the freeing of the casting from adherent sand or other substance and includes the removal of cores and the general smoothing of a casting. but does not include the free treatment.

**2. Prohibition of sand blasting: - Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting:**

Provided that this clause shall come into force two years after coming into operation of this Schedule: Provided further that no woman or young person shall be employed or permitted to work at any operation of sand blasting.

**3. Precautions in connection with blasting operations: - (a) Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and cleaning and repairing of the enclosure including the plant and appliances situated therein, shall be performed in a blasting enclosure. Every door, aperture and joint of blasting enclosure, shall be kept closed and air tight while blasting is being done therein.**

(b) Blasting enclosure shall always be maintained in a good condition and effective measures shall be taken to prevent dust escaping from such enclosure and from apparatus connected therewith, into the air of any room. (c) There shall be provided and maintained for, and in connection with, every blasting enclosure, efficient apparatus for separating so far as practicable, abrasive which has been used for blasting and which is to be used again as an abrasive, from dust or particles of other materials arising from blasting, and no such abrasive shall be introduced into any, blasting apparatus and used for blasting until it has been so separated: Provided that this clause shall not apply, except in the case of blasting chambers, to blasting enclosures constructed or installed before the coming into force of this Schedule, if the Chief Inspector is of opinion that it is not reasonably practicable to provide such separating apparatus. (d) There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract, by exhaust draught effected by mechanical means, dust produced in the enclosure. The dust extracted and removed shall be disposed of by such method and in such manner that it shall not escape into the air of any room, and every other filtering or settling device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or settling device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air. (e) The ventilating plant provided for the purpose of sub-paragraph (d) shall be kept in continuous operation whenever the blasting enclosure is in use whether or not blasting is actually taking place therein, and in the case of blasting inside the chamber for the purpose of cleaning.

**4. Inspection and examination: - (a) Every blasting enclosure shall be specially inspected by a competent person at least once in every week in which it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant shall be thoroughly examined and in the case of ventilating plant, tested by a competent person at least once in every month.**

(b) Particulars of the result of every such inspection, examination or test be entered forthwith in a register which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting in the factory. Any defect



found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier, Manager or other appropriate person and, without prejudice to the foregoing requirements of this Schedule, shall be removed without avoidable delay.

**5. Provision of protective helmets, gauntlets and overalls: - (a) There shall be provided and maintained for the use of all persons who are -employed in blasting chamber, whether in blasting or in any work connected therewith or in cleaning such a chamber, protective helmets of a type approved by a certificate of the Chief Inspector; and every such person shall wear the helmet provided for this use whilst he is in the chamber and shall not remove it until he is outside the chamber.**

(b)Each protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person and has not since been thoroughly disinfected.(c)Each protective helmet when in use shall be supplied with clean and not unreasonably cold air at a rate of not less than 170 litres per minute.(d)Suitable gauntlets and overalls shall be provided for the use of all persons while performing blasting or assisting at blasting and every such person shall while so engaged, wear the gauntlet and overall provided.

**6. Precautions in connection with cleaning and other work: - (a) Where a person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surroundings thereof or upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus of ventilating plant connected therewith so that he is exposed to the risk of inhaling dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation.**

(b)In connection with any cleaning operation referred to in paragraph 5. and with the removal of dust from filtering or settling devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

**7. Storage accommodation for protective wear: - Adequate suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by paragraph 5 shall be provided outside and conveniently near every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls when not in actual use shall be kept in this**

**accommodation.**

**8. Maintenance and cleaning of protective wear: - All helmets, gauntlets, overalls and other protective devices or clothings provided and worn for the purposes of this Schedule, shall be kept in good condition and, so far as is reasonably practicable, shall be cleaned on every weekday in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall, wherever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing.**

**9. Maintenance of Vacuum cleaning plant: - Vacuum cleaning plant used for the purpose of this Schedule shall be properly maintained.**

**10. Medical facilities and records of examinations and tests: - (a) The occupier of every factory to which this Schedule applies shall:**

(i) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and (ii) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i). (b) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all hours during working of the factory.

**11. Medical examination by Certifying Surgeon: - (a) Every worker employed in any of the processes to which this Schedule applies shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function test and chest X-ray. No workers shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the said processes shall be produced for reexamination by a Certifying Surgeon at least once in every 12 calendar months and such re-examination shall, wherever the Certifying Surgeon considers appropriate, include pulmonary function test and chest X-ray once in every three years. (c) The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examination carried out shall be entered in the certificate which shall be kept in the custody of the Manager of the factory. The record of each examination carried under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17. (d) The certificate

of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make record of his findings in the said Certificate and the Health Register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (f) No person who has been found unfit to work in the said processes as said in sub-paragraph (e) above shall be required or allowed to work unless the Certifying Surgeon after further examination, again certifies him fit for employment in those processes.

**12. Restrictions in employment of young persons: - (a) No person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or any apparatus or ventilating plant connected therewith or be employed on maintenance or repair work at such apparatus, enclosure or plant;**

(b) No person under 18 years of age shall be employed to work regularly within twenty feet of any blasting enclosure unless the enclosure is in a room and he is outside that room where he is effectively separated from any dust coming from the enclosure.

**13. Power to exempt or relax: - (a) If the Chief Inspector is satisfied that in any factory or any class of factory, the use of sand or other substance containing free silica as an abrasive in blasting is necessary for particular manufacture or process (other than the process incidental or supplemental to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this Schedule can be suspended either temporarily or permanently or can be relaxed without endangering the health of the persons employed or that application of any of such requirements is for any reason impracticable or inappropriate, he may, by an order, in writing (which he may in his discretion revoke at any time), exempt the said factory or class of factory from such provisions of this Schedule, to such an extent and subject to such conditions and for such period as may be specified in the said order.**

(b)Where an exemption has been granted under sub-paragraph (a) a copy of the order shall be displayed at a notice board at a prominent place at the main entrance or entrances to the factory and also at the place where. the blasting is carried on.]

## **IX**

Liming and tanning of raw hides and skins and processes incidental thereto

**1. Cautionary notices - (1) Cautionary notices as to anthrax in the form specified by the Chief Inspector shall be affixed in prominent position in the factory where they may be easily and conveniently read by the persons employed.**

(2)A copy of a warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each person employed when he is engaged. and subsequently if still employed, on the first day of each calendar year.(3)Cautionary notices as to the effects of chrome on the skin shall be affixed prominent positions in every factory in which chrome solutions are used and such notice shall be so placed as to be easily and conveniently read by the persons employed.(4)Notices shall be affixed in prominent places in the factory stating the position of the "First Aid- box or cupboard and the name of the person in charge of such box or cupboard.(5)If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notice specified in sub-paragraphs (1), (2) and (4) and if chrome solutions are used in the factory, the contents of the notice specified in subparagraph (3).

**2. Protective clothing. - The occupier shall provide and maintain in good condition the following articles of protective clothing -**

(a)water proof footwear, leg coverings, aprons and rubber gloves for persons employed in process involving contact with chrome solutions including the preparation of such solutions;(aa)[ gloves and boots for persons employed in lime yard; and] [Inserted the W.B Factories (Amendment) Rules, 1991](b)Protective footwear, aprons and gloves for persons employed in the handling of hides or skins other than in processes specified in [clauses (a) and (aa)] [Substituted by the West Bengal Factories (Amendment) Rules, 1991][Provided that the gloves, aprons, leg covering or boots may be of rubber or leather but the gloves and boots to be provided under clauses (a) and (b) shall be of rubber.] [Substituted by the West Bengal Factories (Amendment) Rules, 1991][Provided further that the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquer.] [Substituted by the West Bengal Factories (Amendment) Rules, 1991]

**3. Washing facilities, mess-room and cloak-room. - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed-**

(a) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of Water from taps or jets above the trough at intervals of not more than two feet: or (b) at least one wash basin for every ten such persons employed at any one time fitted with a waste pipe and plug and having a constant supply of water, together with. in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material, and clean towels; (c) a suitable mess-room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches, and (2) adequate means for warming food and for boiling water. The mess-room shall (1) be separate from any room or shed in which hides or skins are stored, treated or manipulated, (2) be separate from the cloak room and (3) be placed under the charge of a responsible person: Provided that this clause shall not apply wherein a canteen has been provided under rule 67. (d) suitable accommodation for clothing not worn during working hours with adequate arrangements for drying the clothing if wet. The accommodation so provided shall be placed under the charge of a responsible person.

**4. Food, drinks, etc. prohibited in work-room - No drink, pan and supari r tobacco shall be brought into or consumed by any worker in any work-room or shed in which hides or skins are stored, treated or manipulated.**

**5. [ Medical facilities and record of examination and tests :- (a) The occupier of every factory to which this Schedule applies, shall-**

(i) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; (ii) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i); (iii) arrange for inspection of the hands of all the persons who are keeping in contact with chromium substances, twice a week; (iv) provide, maintain and supply suitable ointment and plaster in a box readily accessible to the workers and solely used for the purpose of keeping the ointment and the plaster. (b) the record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.]

**6. [ Medical examination by Certifying Surgeon - (a) Every worker employed in any of the processes to which this Schedule applies shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include skin test for dermatoses and detection of anthrax bacillus from local lesion by gran stain. No worker shall be required or allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the said processes shall be produced for re-examination by a Certifying Surgeon at least once in every twelve calendar month. Such re-examination shall,

wherever the Certifying Surgeon considers appropriate, include tests as specified in sub paragraph (a). (c) The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate which shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17. (d) The certificate of fitness and the health register shall be kept readily available for inspection by the inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his finding in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said person is unfit for and worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (f) No person who has been found unfit to work as mentioned in sub-paragraph (c) shall be required or allowed to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.]

## X

Feeding of jute, hemp or other fibre into softening machines

**1. Prohibition relating to woman and young person. - No women or young person shall be employed or permitted to work in feeding jute, hemp or other fibre into softening machines.**

## XI

Lifting, stacking, storing and shipping of bales in and from finished goods godowns of jute mills Handling of bales in finished goods godowns of jute mills. - Lifting, stacking and storing of bales in and shipping from finished goods godowns of jute mills shall not be done except by mechanical means. Winch operated lifting tackle without side movement and with the winch driver obstructed from view of the bale to be lifted or lowered, will not be deemed to comply with this rule.

## XII

Manufacture, use of cellulose solutions

**1. Application. - This Schedule shall apply to all factories or parts thereof in which cellulose solution are manufactured, used or stored.**

**2. Saving Clause. - Nothing in this Schedule shall apply to the painting of any building, or to any process in the manufacture of artificial silk, or of explosives or to any factory in which cellulose solutions or inflammable liquids are not manipulated or used for more than 15 minutes on any day.**

Paragraphs 4, 5, 6 and 8 of this Schedule shall not apply to any cellulose space in which the following conditions are observed-(a)The total quantities of cellulose solutions and other inflammable liquids together, consumed in the cellulose space do not exceed four pints on any day, and not more than two pints are kept in the cellulose space at any time.(b)The cellulose solutions and other inflammable liquids do not contain-(i)Benzene ("benzole")(ii)Toluene.(iii)Xylene.(iv)Any halogenated hydrocarbon.(c)The occupier of the factory keeps available for inspection a certificate from the makers of the cellulose solutions and other inflammable liquids used in cellulose space certifying that the solutions and liquids do not contain benzene ("benzol"), toluene, xylene or any halogenated hydrocarbon.

**3. Definition - (a) In this Schedule "Cellulose solutions" mean any solution in inflammable liquid of cellulose acetate, cellulose nitrate, celluloid, or of any other substance containing cellulose, acetate, cellulose nitrate or any other cellulose compound, with or without the admixture of other substances.**

(b)"Cellulose space" means a cabinet, booth or similar structure, or a room or part of a room, within which cellulose solutions are manipulated or used.(c)"Fire Resisting Materials" mean properly constructed brickwork not less than five inches in thickness, concrete not less than three inches in thickness, iron or steel or any other material the thickness of which is approved in writing by the Chief Inspector of Factories.

**4. Separation of cellulose space. - Every cellulose space shall be separated by enclosure from every other part of the building except in so far as openings are necessary for the purpose of the work or for operation of the ventilating apparatus required by paragraph 6.**

**5. Provisions for fire-proofing. - (a) All walls, partitions, doors, windows, floors, tops, and ceilings, enclosing or forming part of the enclosure of any cellulose space shall be constructed of fire-resisting material, except as regards (1) any cellulose space which was in use as such before the commencement of these rules, and (2) any tops or ceilings of rooms in single storey buildings or of top floor rooms or any outside walls doors or windows other than any of the aforesaid parts of a building in respect of which the Chief Inspector of Factories specially directs that this exception shall not apply.**

(b) All ducts, trunks or casings used in connection with the means of ventilation required by paragraph 4 above shall be constructed of fire-resisting material.

**6. Ventilation. - (a) Every cellulose space shall be adequately ventilated by mechanical means so as to remove any vapour of cellulose solutions or inflammable liquids and to prevent them (as far as may be practicable under the atmospheric conditions usually prevailing) from entering into any place where work is carried on. Such ventilation shall be kept in full operation for at least five minutes after cessation of work.**

(b) Where cellulose solutions are applied by spraying apparatus, arrangements shall (as far as practicable) be made so as to render it unnecessary for the person operating the spray to be in a position between the ventilation outlet and the article being sprayed.

**7. Prohibition relating to smoking etc. - There shall be no smoking, fire, flame, open light or other agency likely to cause ignition within 20 feet of any cellulose spray unless separation therefrom is effected by means of intervening fire-resisting material.**

**8. Fire escapes. - Adequate means of escape in case of fire, including a sufficient number of safe exits not fewer than two in number shall be provided and maintained for every room or part of a room in which cellulose solutions are manipulated and such exits shall be constructed so as to open outwards or to slide.**

**9. Precautions against fire. - (a) Cotton waste, cleaning rags or similar material liable to spontaneous combustion shall, after use, be deposited without delay in metal containers with covers or be removed without delay to a safe place.**

(b) Solid residues resulting from the manufacture, manipulation or use of cellulose solutions shall be removed from all cellulose spaces and from the ventilating apparatus used therewith and shall be deposited in a safe place. No such removal shall be effected by scraping with iron or steel implements.

**10. Fire Extinguishers. - An adequate supply of efficient fire extinguishing appliances in suitable position shall be provided for every cellulose space.**



**11. Storage. - (a) All stock of cellulose solutions or inflammable liquid shall be kept in (i) fixed storage tanks in safe positions, or (ii) metal drums, cans or similar vessels situated in store rooms which shall either be constructed of fire-resisting material or be in safe positions not less than 30 feet from any occupied building.**

(b) The quantity of cellulose solution or inflammable liquid in any cellulose space shall not exceed the estimated requirements for one day's use.

**12. Prohibition relating to women and young persons. - No woman or young persons shall be employed in the manipulation or use of cellulose solutions or inflammable liquids containing more than fifteen per cent by weight of benzene and any such solutions or liquids shall not be procured or stored otherwise than in receptacles legibly marked as containing benzene.**

### **XIII**

Manufacture of chromic acid or manufacture or recovery of the bichromate of sodium, potassium or ammonium

#### **1. Definitions. - For the purposes of this Schedule-**

(a) "Chrome Process" means the manufacture of chromic acid, chromate or bichromate of sodium or potassium or ammonium, any preparation of these substances, or any process involving the use of such preparation or of these substances, and shall also include the manipulation, movement or treatment of such substances or any preparation of such substances. (b) "Efficient Exhaust Draught" means localized ventilation effected by mechanical or other means for the removal of gas vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fumes or dust from the point where they originate. [\*\*\*] [Omitted by the West Bengal Factories (Amendment) Rules, 1991]

**2. Prohibition relating to women and young persons. - No woman or young person shall be employed or permitted to work on any chrome process.**

**3. Efficient exhaust draught. - The following chrome processes shall not be carried on without the use of an efficient exhaust draught, unless they are carried on by means of an enclosed mechanical or other appliance so constructed as to prevent the escape of dust, fume, vapour or gas into the atmosphere, where any person is working-**

(a)grinding;(b)sieving;(c)batch mixing;(d)leaching and acidification, and(e)concentration (Evaporating Tanks).

**4. Washing facilities - (1) Where acidifications, filtration, sulphate settling or washing, concentration, crystallization, centrifugation or packing is carried out, there shall be provided close to the place of work -**

(a)wash places with running water for frequent washing of hands and feet, and(b)a container holding at least 20 ounces of 10 per cent solution of sodium bisulphide or any other suitable reducing agent for treating chromic acid split on clothes or any part of body.(2)There shall also be provided and maintained in a clean state and good repair washing accommodation under cover, with a sufficient supply of soap, nail brush and towels on the scale indicated below-At least one tap or stand pipe for every 10 employees and the tap or pipe shall be spaced not less than 4 feet apart.Note: - In computing the total number of taps required for the purposes of this rule, the taps or stand pipes as required under paragraph 4(1) (a) shall be included.

**5. Time to be allowed for washing. - Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing to each person employed in a chrome process.**

**6. Flooring - The floor of every work-room, shall be-**

(a)of cement or similar other material so as to be smooth and impervious to water and provided with suitable gradient and drainage;(b)maintained in sound condition and cleaned daily.

**7. [ Medical facilities and records of examination and tests. - The occupier of every factory to which this Schedule applies shall-**

(a)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector;(b)in addition employ a person trained in First Aid treatment for daily medical surveillance of the workers employed therein;(c)provide to the said medical practitioner and the person all the necessary facilities for the purpose referred to in sub-paragraphs (a) and (b),(d)provide and maintain a sufficient supply of protective cream such as glycerin, Vaseline etc. for application to hands, feet and nostrils and impermeable waterproof plaster dressing in a separate box, readily accessible to the workers and used solely for the purpose of keeping the cream and plaster dressing and;(e)The record of medical examination and appropriate tests, carried out by the medical practitioner and the person under sub-paragraphs (a) and (b), shall be maintained in a separate register, approved by the Chief Inspector and it shall be kept readily available for inspection by the Inspector at all times during working of the factory.

## **7A. Medical examination by Certifying Surgeons.**

(a) Every worker employed in chrome processes shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include all such tests as may be deemed necessary. No worker shall be required or allowed to work after 15 days of his first employment by the Certifying Surgeon. (b) Every worker employed in the chrome processes shall be produced periodically for re-examinations by a Certifying Surgeon at least once in every three calendar months. Such re-examination includes appropriate tests specified in sub-paragraph (a). (c) The Certifying Surgeon after examining a worker shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate which shall be kept in the custody of the Manager of the factory. The record of each examination, carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests shall also be entered by the Certifying Surgeon in a health register in Form 17, maintained in the factory. (d) The certificates of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the chrome process on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents shall also include the period for which he considers that the said person is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitable rehabilitated. (f) No person who has been found unfit to work as mentioned in sub-paragraph (e) above shall be required or allowed to work in the chrome processes unless the Certifying Surgeon, after further examination, again certifies him fit from employment in the said processes.]

## **8. Protective clothing and equipment. - (1) The occupier shall provide and maintain for the use of all persons employed-**

(a) in grinding, sieving or mixing raw materials and cooling or raking roasted mass, sufficient and suitable [overall omits and] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.] respirators (issued separately for each individual) the filtering materials of which shall be renewed daily; (b) in roasting process, suitable protective footwear, respirators and glove or mitten; (c) in acidification, settling, concentration, crystallization centrifugation or packing aprons and protective converging for hands and feet; and (d) in furnace cleaning and dismantling, suitable protective clothing and equipment. (2) Arrangement shall be made by the occupier for the proper maintenance and supervision of all protective clothing and equipment at the close of each day's work and for the repairs or renewal thereof when necessary. (3) Arrangements shall be made for cleanliness of tools and equipment of the maintenance staff of the factory.

## **9. Use of protective equipment. - Every person employed in a chrome process shall make use of the protective cream on his hands, feet and nose and also of the protective clothing and equipment provided under paragraph**

**8.**

**10. [ Cloak-room and storage of protective equipment - There shall be provided and maintained for the use of all persons employed in chrome processes, a suitable cloak-room for clothing put-off during working hours and a suitable place separate from the cloak-room, for the storage of all the working clothes and protective equipments and no such clothes and equipments shall be stored in any place other than the room or place so provided. The accommodation so provided shall be placed in charge of a responsible person and shall be kept clean.] [Substituted by the West Bengal Factories (Amendment) Rules, 1991]**

**11. Mess-room. - (1) There shall be provided and maintained for the use of all persons remaining within the premises during the meal intervals a suitable mess-room provided accommodation of at least 10 sq.ft. per head and furnished with**

(i)a sufficient number of tables and chairs or benches;(ii)arrangements for washing utensils;(iii)adequate means for warming food,(2)The mess-room shall be placed under the charge of responsible person, and shall be kept clean.

**12. Food, drinks, etc., prohibited in work-room. - No food, drink "Pan", "Supari" or tobacco shall be brought or consumed by any worker in any work-room in which chrome process is carried on and no person shall remain in any such room during intervals for meals or rest.**

**13. Separate locker shall be provided, where food, etc., shall be stored by workers before it is actually consumed in the mess-room'.**

**14. Medical examination - (1) Every person employed in a chrome process shall be examined by a Certifying Surgeon, once in every calendar month or at such other intervals as may be specified in writing by the Chief Inspector on a day of which due notice shall be given to all concerned and such examination shall take place on the factory premises.**

(2)Every person employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in sub-paragraph (1).(3)A Health Register as nearly as possible in Form No.17 containing the names of all persons employed in a chrome process shall be kept.(4)No person after suspensions shall be employed in chrome process without written sanction from the

Certifying Surgeon entered in the Health Register.

**15. Fencing of vessels. - Every fixed vessel, whether pot, pan, vat or other structure, containing any dangerous material, and not so covered as to eliminate all reasonable risk of accidental immersion of any portion of the body of a person employed shall be fenced as follows:-**

(a) Each such vessel shall, unless its edge is at least 3 feet above the adjoining ground or platform, be securely fenced to a height of at least 3 feet above such adjoining ground or platform: (b) No plank or gangway shall be placed across or inside any such vessel unless such plank or gangway is - (i) At least 18 inches wide; and (ii) securely fenced on both sides, either by upper and lower rails, to a height of 3 feet or by other equally efficient means. (c) If any two such vessels are near each other and the space between them clear any surrounding brick work or other work, it either. (i) less than 18" in width, or (ii) less than 18" in width, but is not securely fenced on both sides to a height of at least 3 feet, secured barriers shall be placed so as to prevent any passage between them.

**16. For the purpose of limiting exposure levels in various departments the various processes shall be isolated as given below:-**

(1) Storage of raw materials. (2) (a) Sieving, (b) grinding and mixing. (3) (a) Roasting, (b) Cooling of roasted ore. (4) Leaching, concentration, crystallisation and drying. (5) Packing.

**17. Proper type of receptacles shall be provided for corrosive liquids to prevent their spillage.**

**18. Adequate arrangements shall be made for the storage or disposal of waste material so as to avoid atmospheric or ground pollution.**

**19. Cautionary notice - A cautionary notice in the form specified by the Chief Inspector of Factories and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.**

Arrangements shall also be made for issue of verbal instructions to the uneducated workers.

**20. Exemption. - If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstance or the infrequency of the process, or for any other reason, all or any of the provisions of this Schedule are not necessary for the protection of the persons employed in such factory, he may by certificate in writing exempt such factory from all or any of the**

**provisions indicated in such certificate on such conditions as he may specify therein. Such certificate may at any time at his discretion be revoked by the Chief Inspector.**

## **XIV**

Printing Presses and Type Foundries-Certain lead process carried on therein

**1. Exemption - Where the Chief Inspector is satisfied that all the provisions of this Schedule are not necessary for the protection of person employed he may by certificate in writing exempt any factory from all or any of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.**

### **2. Definition - [In these regulations-**

[i] "lead material" means material containing not less than five per cent of lead;(ii)[] [Inserted by the West Bengal Factories (Amendment) Rules, 1991] "lead process" means-(a)the melting of lead or any lead material for casting and mechanical composing.(b)the re-charging of machines with used lead material;(c)any other work including removal of dross from melting pots, cleaning of plungers, and(d)manipulation, movement or other treatment of lead material.(iii)[] [Inserted by the West Bengal Factories (Amendment) Rules, 1991] "Efficient exhaust draught" means localized ventilation effected by heat or mechanical means, for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fume or dust at the point where they originate.

**3. Exhaust draught. - None of the following processes shall be carried on except with an efficient draught:**

(a)melting lead material or slugs;(b)heating lead material so that vapour containing lead is given off; or unless carried on in such a manner as to prevent free escape of gas. vapour, fume, or dust into any place in which work is carried on, or, unless carried on in electrically heated and thermostatically controlled melting pots 1. Inserted by the West Bengal Factories (Amendment) Rules, 1991[which shall be so contrived as to operate on the dust, fume, gas or vapour given off as closely as possible to the point of origin.][\*\*\*] [Omitted by bid]

**4. Prohibition relating to women and young persons. - No woman or young person shall be employed or permitted to work in any lead process.**

**5. Separation of certain process. - Each of the following process shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and from any other process:-**

(a)melting of lead or any lead material;(b)casting of lead ingots;(c)mechanical composing.

**6. Container for dross. - A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room near the machine except when the dross is being deposited therein.**

**7. Floor of work-room. - The floor of every work-room where lead process is carried on shall be**

(a)of cement or similar material so as to be smooth and impervious to water;(b)maintained in sound condition; and(c)shall be cleaned throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.

**8. Mess-room - There shall be provided and maintained for the use of all persons employed in lead process and remaining on the premises during the meal intervals a suitable mess-room which shall be furnished with sufficient tables and benches; Provided that this provision shall not apply where a canteen has been provided under section 46 of the Act.**

**9. Washing facilities. - There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process-**

(a)a wash place with either-(i)a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least two feet for every such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals of not more than 2 feet; or(ii)at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available; and(b)a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material.

**10. [ Medical facilities and records of examinations and tests. [Substituted by the West Bengal Factories (Amendment) Rules, 1991]**

(a)The occupier of every factory to which this Schedule applies, shall-(i)employ a qualified medical

practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examination and appropriate tests, carried out by the medical practitioner and the person under sub-paragraphs (a) and (b), shall be maintained in a separate register, approved by the Chief Inspector and it shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**10A. Medical examination by Certifying Surgeon. - (a) Every worker employed in a lead process shall be produced for examination by a Certifying Surgeon with 15 days of his first employment. Such examination shall include all such tests for lead in urine and blood, ALA in urine, haemoglobin, stippling of cells and steadiness test. No worker shall be required or allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said processes shall be produced for re-examination by a Certifying Surgeon at least once in every six calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified in sub-paragraph (a).(c)The Certifying Surgeon after examining a worker shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate which shall be kept in the custody of the Manager of the factory. The record of each examination. carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests shall also be entered by the Certifying Surgeon in a health register in Form 17.(d)The certificates of fitness and The health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(e)If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents shall also include the period for which he considers that the said person is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(f)No person who has been found unfit to work as mentioned in sub-paragraph (e) above shall be required or allowed to work in the said processes unless the Certifying Surgeon, after further examination, again certified him fit for employment in the said processes.]

**11. Food, drinks, etc., prohibited in work-room. - No food, drink, pan, supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.**

[Schedule - XV [Substituted by Notification No. 340 L.W./L.W./IR-4/85 dated 2nd April, 1986]Compression of hydrogen and oxygen produced by electrolysis of water.



**1. The provision of this Schedule shall apply to all factories where either hydrogen or oxygen or both gases are manufactured by the electrolytic method with a view to compressing the gases for any purpose whatsoever.**

**2. The water and the caustic soda or the caustic potash used for making lye shall be chemically pure within the pharmaceutical limits.**

**3. (a) The purity of oxygen and hydrogen shall be tested by a competent person at least once in every four hours at the following posts:-**

(i) in the electrolysis room; (ii) at the gas holder inlet; and (iii) at the suction end of the compressor; Provided, however, that if the electrolysis plant is fitted with automatic recorder of purity of oxygen and hydrogen with alarm signals and lights, it shall be sufficient if the purity of gases is tested at the suction end of the compressor only. (b) The results of test or analysis shall be entered in a register showing :- (i) the date of test, (ii) the time of test, (iii) the purity of the gas tested and (iv) the signature of the person carrying out the test. (c) The register shall be available to the Inspector at all times during working hours, or when any work is being carried on inside the factory.

**4. The oxygen and hydrogen gas shall not be compressed if their purity as determined under paragraph 3 above falls below 98 per cent at any time.**

**5. (a) The room in which the electrolysis plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.**

(b) High pressure gas vessel shall be preferably located in open sided sheds. If located otherwise, provision shall be made for adequate ventilation to the satisfaction of the Inspector.

**6. All electric fittings shall be of flame-proof construction, shall be maintained in flame-proof state, and all electric conducts shall be enclosed in flame-proof metal fittings conduits.**

**7. Gas holders, gas pipe lines and, wherever possible, high pressure gas vessels shall be effectively earthed.**

**8. Prominent notices in the language understood by the majority of the workers and legible both in day and night prohibiting smoking or the use of naked lights, and carrying of matches, or any apparatus for producing a naked light or spark shall be affixed at the entrance of every room or place**

**where there is risk of fire or explosion.**

**9. Electrical connections at the electrolysis cells and the electric generator terminals shall be so constructed as to preclude the possibility of wrong connections leading to the reversal of polarity and in addition an automatic device shall be provided to cut off power in the event of reversal of polarity owing to wrong connections either at the switch board or at the electric generator terminals.**

**10. Oxygen and hydrogen pipes shall be painted with distinguishing colours so as to eliminate the possibility of inter-connections.**

**11. If for any reason hydrogen gas pipe-joints are broken, all such pipe lines shall be purged of air re-connecting and before drawing hydrogen gas.**

**12. Each plant shall be provided with at least two gas holders for each kind of gas fitted with adequate number of interlinked stop valves so that no gas holder shall be connected to the compressor and to the electrolysis at the same time:**

Provided, however, if an automatic recorder is installed between the gas holder and the hydrogen compressor and if the same is interlocked to switch off the compressor motor in the event of the purity of the gas falling below 98 per cent, it shall be sufficient if one gas holder is provided for the gas being collected and compressed.

**13. (a) The bell of any gas holder shall not be permitted to go within 30 centimetres of its lowest position when empty and a limit switch shall be fitted to the gas holder in such a manner as to switch off the compressor motor when the limit is reached.**

(b) In the addition to the limit switch in the gas holder, a sensitive negative pressure switch shall be provided in or adjacent to the suction main for hydrogen dose to the gas holder and between the gas holder and hydrogen compressor to switch off the compressor motor in the event of the gas holder being emptied to the extent to cause vacuum.

**14. No part of the electrolyser plants and the gas holders and compressor shall be subjected to welding, brazing, soldering or cutting until steps have been taken to remove any explosive substance from that part and render the part safe for such operations and after the completion of such operations on**

**explosive substance shall be allowed to enter that part until the metal has cooled sufficient to prevent risk of explosion.**

**15. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who, by his training, experience and knowledge of the necessary precaution against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolyzers unless the same is certified by the competent persons under whose direct supervision erection or repairs are carried on to be in as safe condition and the terminals have been checked for the polarity as required by paragraph 9.**

**16. Every part of the electrolysis plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.**

**17. Where the Chief Inspector is satisfied that owing to the special conditions or special methods, all or any of the provisions of this Schedule are not necessary for the protection of persons employed, he may by order in writing exempt any factory from all or any such provision subject to such conditions as he may specify therein. Such order may at any time be revoked by the Chief Inspector at his discretion.]**

## **XVI**

### **Manufacture of Pottery**

**1. Definition. - (a) "Efficient exhaust draught" means localized ventilation effected by mechanical or other means for the removal of dust or fume so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove effectively dust or fume generated at the point where dust or fume originated.**

(b) "Fettling" includes scalloping, towing, sand papering, sand sticking, brushing or any other process of cleaning of pottery ware in which dust is given off; (c) "Ground or powdered flint or quartz" does not include natural sands; (d) "Leadless glaze" means a glaze which does not contain more than one per cent, of its dry weight of a lead compound calculated as lead monoxide. (e) "Low solubility glaze" means a glaze which does not yield to dilute hydrochloric acid more than five per cent of its dry weight of a soluble lead compound calculated as lead monoxide when determined in

the manner described below: A weighed quantity of the material which has been dried at 100°C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate; (f) "Pottery" includes earthenware, stoneware, porcelain, chinatiles and any other articles made from clay or from a mixture containing clay and other materials such as, quartz, flint, feldspar; and (g) "Potters shops" includes all places where potter is formed by pressing or by any other process and all places where shaping, fettling or other treatment of pottery articles prior to placing for the biscuit fire is carried on.

## **2. Efficient exhaust draught. - The following processes shall not be carried on without the use of an efficient exhaust draught, namely:-**

(i) all processes involving the manipulation or use of a dry and unfritted lead compound; (ii) fettling operations of any kind, whether on green ware or biscuit, provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power; (iii) sifting of clay dust or any other material for making tiles or other articles by pressure, except where - (a) this is done in a machine so enclosed as to effectually prevent the escape of dust; or (b) the material to be sifted is so damp that no dust can be given off; (iv) pressing of the tiles from clay dust, or pressing from clay dust of articles other than tiles unless the material is so damp that no dust is given off, and in any such case, the exhaust draught shall be applied to each press; (v) fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with, damp material; this clause shall also apply to the fettling of other articles made from clay dust, unless the material is so damp that no dust is given off; (vi) process of loading and unloading of saggars where handling and manipulation of ground and powdered flint, quartz, alumina or other materials are involved; (vii) brushing of earthenware biscuit, unless the process is carried on in a room provided with efficient general mechanical ventilation or other ventilation which is certified by the Inspector of Factories as adequate, having regard to all the circumstances of the case; (viii) fettling of biscuit ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectually prevent the escape of dust; (ix) ware cleaning after the application of glaze by dipping or other process; (x) crushing or dry grinding of materials for pottery bodies, and saggars, unless carried on in a machine so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off; (xi) sieving or manipulation of powdered flint, quartz, clay grog or mixture of those materials unless it is so damp that no dust can be given off; (xii) grinding of tiles on power driven wheel unless an efficient water spray is used on the wheel; (xiii) lifting and conveying of materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near to any place where persons are employed; (xiv) preparation or weighing out of flow materials, lawning of dry colours, colour dusting and colour blowing; (xv) mould making unless the bins or similar receptacles used for holding Plaster of Paris are provided with suitable covers; and (xvi) manipulation of calcined material unless the material has been made and remains so wet that no dust is given off.

**3. Each of the following processes shall be carried on in such a manner and under such condition so as to secure effectual separation from one another, and from other wet processes namely:-**

(i)crushing and dry grinding or sieving of materials, fettling, pressing of tiles, drying of clay and green-ware, loading and unloading of saggars;(ii)all processes involving the use of a dry lead compound.

**4. No glaze which is not leadless glaze or a low solubility glaze shall be used in a factory in which pottery is manufactured.**

**5. No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 2, or at any place where such operations are carried on.**

**6. The potter's wheel (Jolly and Jigger) shall be provided with screens or so constructed as to prevent clay scrapings being thrown off beyond the wheel.**

**7. (a) All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors, and**

(b)damp saw-dust or other suitable material shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased.

**8. The floors of potters' shops, slip houses, dipping houses and ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily by a moist device by an adult male.**

**9. [ Medical facilities and records of examination and tests.**

(a)The occupier of every factory to which this Schedule applies, shall-(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examination and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**10. Medical examination by Certifying Surgeon. - (a) Every worker employed in any process mentioned under paragraph 2, shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine, haemoglobin content, stippling of cells and pulmonary function tests and chest X-ray for worker engaged in processes mentioned in clauses (i) and (xiv) of paragraph 2 and pulmonary function tests and chest X-ray for others. No worker shall be required or allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) All person employed in any of the processes included under clauses (i) and (xiv) of paragraph 2 shall be produced for re-examination by a Certifying Surgeon once in every 3 calendar months. Those employed in any other processes mentioned in the remaining clauses of paragraph 2 shall be produced for re-examination by a Certifying Surgeon once in every 12 months. Such examinations in respect of all the workers shall include all the tests as specified in sub-paragraph (a) except chest X-ray which shall be once in 3 years. (c) The Certifying Surgeon after examining a worker, shall issue certificate of fitness in Form 25. The record of examination and re-examination carried out shall be entered in the Certificate which shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in the health register in Form 17. (d) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents shall also include the period for which he considers that the said person is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (f) No person who has been found unfit to work as mentioned in sub-paragraph (e) above shall be required or allowed to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those process.]

**11. Protective equipment. - (1) The occupier shall provide and maintain suitable over-all and head coverings for all persons employed in process included under paragraph 2.**

(2) The occupier shall provide and maintain suitable aprons of water-proof or similar material, which can be sponged daily, for the use of the dippers, dippers assistants, throwers, jolly workers, casters, mould makers, and filter press and pug mill workers. (3) Aprons provided in pursuance of paragraph 11 (2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process.

All overalls and head coverings shall be washed, cleaned and mended at least once a week, and this washing cleaning or mending shall be provided for by the occupier.(4)No person shall be allowed to work in emptying sacks of dusty materials, weighing out and mixing of dusty materials and charging of ball mills and blungers without wearing a suitable and efficient, dust respirator.

**12. Washing facilities. - The occupier shall provide and maintain, in a clean condition and in good repair, for the use of all persons employed in any of the processes specified in paragraph 2, a wash place under cover, with -**

(a)(i)a trough with smooth impervious surface fitted with a waste pipe, without plug, and sufficient length to allow at least two feet for every five such persons employed at one time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than two feet; or(ii)at least one tap or stand pipe for every five such persons employed at any time, and having constant supply of clean water, the tap or stand pipe being spaced not less than 4 feet apart;(b)a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.

**13. Time allowed for washing. - Before each meal and before the end of the day's work at least ten minutes in addition to regular meal times shall be allowed for washing to each person employed in any of the processes mentioned in paragraph 2.**

**14. Mess-room. - (1) There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable mess-room providing accommodation of 10 square feet per head and furnished with-**

(i)a sufficient number of tables and chairs or benches with back rest;(ii)arrangements for washing utensils;(iii)adequate means for warming food; and(iv)adequate quantity of drinking water;Provided that this paragraph shall not apply to a factory where a canteen has been provided under rule 67.(2)The room shall be adequately ventilated by the circulation of fresh air and placed under the charge of a responsible persons and shall be kept clean.

**15. Food, drink, etc., prohibited in work-room. - No food, drink, pan and supari, or tobacco shall be brought into, or consumed by any worker in any work-room in which any of the processes mentioned in paragraph 2 are carried on and no person shall remain in any such room during intervals for meal or rest.**

**16. Cloak-room etc. - There shall be provided and maintained for the use of all persons employed in any of the processes mentioned in, paragraph 2-**

(a) a cloak-room for clothing put off during working hours and such accommodation shall be separate from any mess-room; (b) separate and suitable arrangements for the storage of protective equipment referred to in paragraph 11.

**17. The provisions of this Schedule shall not apply to a factory in which any of the following articles, but no other pottery is made: -**

(a) unglazed or salt glazed bricks and tiles; and (b) architectural terra-cotta made from plastic clay and either unglazed or glazed with a leadless glaze only.

**18. Exemption. - If in respect of any factory the Chief Inspector is satisfied that all or any of the provisions of this Schedule are not necessary for the protection of the persons employed on such factory, he may by a certificate in writing exempt such factory from all or any of such provisions, subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector without assigning any reasons.**

**XVII [Substituted by the West Bengal Factories (Amendment) Rules, 1991]**

Manufacture of Rayon by Viscose Process

**1. Definition. For the purpose of this Schedule-**

(a) "approved" means approved for the time being, in writing, by the Chief Inspector; (b) "breathing apparatus" means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted air; or any other approved apparatus; (c) "churn" means the vessel in which alkali cellulose pulp is treated with carbon disulphide; (d) "dumpling" means transfer of cellulose exanthate from a dry churn to a dissolver; (e) "efficient exhaust draught" means localized ventilation by mechanical means for the removal of any gas fume or vapour, so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient if it fails to control effectively any gas or vapour generated at the point where such gas, fume or vapour originates; (f) "life belt" means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man; (g) "protective equipment" means apron, goggles, face shields, foot wear, gloves and overalls made of suitable materials.



**2. Ventilation. - (a) In all workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of Carbon-disulphide and hydrogen sulphide in the air of every work environment within the permissible limits.**

(b) Notwithstanding the requirements in sub-paragraph (a), an efficient exhaust draught shall be provided and maintained to control the concentration of Carbon-di-sulphide and hydrogen sulphide in the air at the following locations : (i) dumping hoppers of dry churns; (ii) spinning machines; (iii) trio rollers and cutters used in staple fibre spinning; (iv) hydro-extractors for yarn cakes; (v) after treatment process; and (vi) spin baths. (c) In so far as the spinning machines and trio rollers and cutters used in staple fibre spinning are concerned, they shall be, for the purpose of ensuring the effectiveness of the exhaust to be provided as required in sub-paragraph (a), enclosed as fully as practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of Carbon-di-sulphide and hydrogen sulphide escaping to the work environment. (d) No dry churn shall be opened after completion of reaction without initially exhausting the residual vapour of carbon-di-sulphide by operation of a suitable and efficient arrangement for exhausting the vapour which shall be continued to be operated as long as the churn is kept opened. (e) Wherever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (b), (c) and (d) is ineffective, fails or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment or purpose specified in the above said sub-paragraphs are in use as soon as possible, and in any case within 15 minutes after such an occurrence. (f) All ventilation system provided for the purpose as required in sub-paragraphs (b); (c) and (d) shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or tests shall be rectified forthwith. (g) A register containing particulars of such examinations and tests and the state of the systems and the repairs or alternations (if any) found to be necessary shall be maintained and kept available for inspection by an Inspector at all times during working of the factory.

**3. Waste from spinning machines: - Waste from the spinning machines shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed of as quickly as possible after decontamination.**

**4. Lining of Dry churns. - The inside surface of all dry churns shall be coated with a non-sticky paint so that cellulose xanthate may not stick to the surface of the churn. Such coating shall be maintained in good working condition.**

**5. Air monitoring: - (a) To ensure the effectiveness of the control measures, monitoring of carbon-di-sulphide and hydrogen sulphide in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purpose.**

(b) For the purpose of the requirement in sub paragraph (a), instantaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analysed by an approved method. The location where such monitoring is to be done shall be as directed by the Inspector. (c) if the concentration of either carbon disulphide or hydrogen sulphide exceeds the permissible limits for such vapour gas as laid down in rule 196, suitable steps shall be taken for controlling the concentrations in air of such contaminants. A report of such occurrences shall be sent to the Chief Inspector forthwith.

**6. Prohibition to remain in fume process room, - No person during his intervals for meal, or rest shall remain in any room wherein fume process is carried on.**

**7. Prohibition relating to employment of young persons. - No young person shall be employed or permitted to work in any fume process or in any room in which any such process is carried on.**

**8. Protective equipment: - (a) The occupier shall provide and maintain in good condition protective equipment as specified in the table below for use of persons employed in the process referred to therein.**

Process	Protective Equipment
1. Dumping	Ovealls, face-shields, gloves and footwear— all made of suitable materials.
2. Spinning	Suitable aprons, gloves and foot wear.
3. Process involving or likely to involve contact with viscosesolution	Suitable gloves and foot wear.
4. Handling of sulphur	Suitable chemical goggles
5. Any other process involving contact with hazardouschemicals	Protective equipment as may be directed by the Chief Inspector by an order in writing.

(b) A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms or lockers so provided.

**9. Breathing apparatus: - (a) There shall be provided in every factory where fume process is carried on, sufficient supply of-**

(i)breathing apparatus;(ii)oxygen and suitable appliances for its administration; and(iii)life belts.(b)(i)The breathing apparatus and other appliances referred to in sub-paragraph (a), shall be maintained in good condition and kept in appropriate locations so as to be readily available;(ii)the breathing apparatus and other appliances referred to in clauses (i) and (ii) of sub paragraph (a) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person;(iii)a record of the maintenance and of the checking of the condition of the breathing apparatus and other appliances referred to in sub-paragraph (a), shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector at all times during working of the factory.(c)Sufficient number of workers shall be trained and periodically retained in the use of breathing apparatus and administering artificial respiration so that at least 2 such trained persons be available at all times during the working hours in each room in which fume process is carried on.(d)Breathing apparatus shall be kept, properly labelled, in clean, dry, light-proof cabinets and if liable to be affected by fumes, shall be protected by placing them in suitable containers.(e)No person shall be allowed or required to perform any work specified in sub-paragraph (a) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.(f)No breathing apparatus, provided in pursuance of sub-paragraph (g), which has been worn by a person shall be allowed or required to be worn by another person unless it has been thoroughly cleaned and disinfected since last work and the said person has been fully instructed in the proper use of that equipment.

**10. Electric fittings All electric fittings in any room in which carbon-di-sulphide is produced, used or given off or is likely to be given off into the work environment, other than a spinning room, shall be of flameproof construction and all electric conductors shall either be enclosed in metal conduits or be lead sheathed.**

**11. Prohibition relating to smoking etc.: No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in room in which fume process is carried on. A notice in a language understood by the majority of the workers shall be displayed in prominent locations in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms;**

Provided that fire, naked light or other means of producing naked light or spark may be carried on in such room only when required for the purposes of the process itself under the direction and supervision of a responsible person.

**12. Washing and bathing facilities: - (a) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the Schedule adequate washing and bathing places having a constant supply of water, under cover, at the rate of one such place for every 25 persons employed:**

Provided that if female workers are employed, such washing and bathing places shall be so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass and all such places shall bear conspicuous notice "For Women Only" and to be pictorially indicated. (b) The washing places shall have stand-pipes placed at intervals of not less one metre. (c) Not less than one half of the total number of washing places shall be provided with bathrooms. (d) Sufficient supply of soap, nail brushes and clean towels made of suitable material shall be provided. Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

**13. Rest room. - (a) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.**

(b) Such rest room shall be provided with fresh air supply and adequate seating arrangement.

**14. Cautionary notice and instructions: - (a) The following cautionary notice shall be prominently displayed in each fume process room:**

Cautionary Notice

**1. Carbon disulphide (CS<sub>2</sub>) and Hydrogen sulphide (H<sub>2</sub>S) which may be present in this room are hazardous to health.**

**2. Follow safety instructions.**

**3. Use protective equipment and breathing apparatus as and when required.**

**4. Smoking is strictly prohibited in this area.**

This notice shall be in a language understood by the majority of the workers and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed. (b) Arrangements shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the preventive measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically. (c) Simple and special instructions shall be framed to ensure that effective measures

shall be carried out in case of emergency involving escape of carbon disulphide and hydrogen sulphide. These instructions shall be displayed in the concerned areas and workers shall be instructed and trained in the actions to be taken in such emergencies.

**15. Medical facilities and records of examinations and tests: - (a) The occupier of each factory to which this Schedule applies shall -**

(i) employ a qualified medical practitioner for medical surveillance of the workers employed in the fume process whose employment shall be subject to the approval of the Chief Inspector. (ii) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i). (b) The record of medical examination and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**16. Medical Examination by the Certifying Surgeon: - (a) Every worker employed in the fume process shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for estimation of exposure co-efficient (iodine azide test on urine) and cholesterol, as well as electrocardiogram (ECG) and Central Nervous System (CNS) tests. No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the fume process shall be produced for re-examination by a Certifying Surgeon at least once in every twelve calendar months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (a). (c) The Certifying Surgeon after examining a worker shall issue a certificate of fitness in Form 25. The record of re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the Manager of the factory. The record of each examination, carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests shall also be entered by the Certifying Surgeon in a health register in Form 17. (d) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (e) If, at any time, the Certifying Surgeon is of the opinion that a work & is no longer fit for employment in the fume process on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the fume process. (f) No person, who has been found unfit to work as said in sub-paragraph (e) above, shall be required or allowed to work in the fume process unless the Certifying Surgeon, after further examination again certifies him fit for employment in such process.

**17. Exemptions - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory. the Chief Inspector may, by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.]**

## **XVIII**

### **Chemical Works**

#### **Part I**

**1. Application. - This Schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.**

**2. Definitions. - For the purpose of this Schedule -**

(a)"Chemicals works" means any factory or such parts of any factory as are listed in appendix "A" to this Schedule;(b)"efficient exhaust draught" means localized ventilation affected by mechanical or other means for the removal of gas, vapour, fume or dust to prevent it from escaping into the air of any place in which work is carried on;(c)"bleaching powder" means the bleaching powder commonly called chloride of lime;(d)"chlorate" means chlorate or perchlorate;(e)"caustic" means hydroxide of potassium or sodium;(f)"nitro or amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosives with the use of any of these substances;(g)the term 'permit to work' system means the compliance with the procedures laid down under paragraph 20 of Part II;(h)"toxic substances" means all those substances which, when they enter into the human body, through inhalation or ingestion or absorption through skin, in sufficient quantities, cause fatality or exert serious affliction of health, or chronic harmful effects on the health of persons exposed to it due to its inherent chemical or biological effect. In respect of substances whose TLV is specified in Schedule - II of the Act, exceeding the concentration specified therein would make the substance toxic;(i)"emergency" means a situation or condition leading to a circumstance or set of circumstances in which there is danger to the life or health of persons or which may result in big fire or explosion or pollution to the work and outside environment, affecting the workers or neighbourhood in a serious manner, demanding immediate action;(j)"dangerous chemical reaction" means high speed reactions, runaway reactions etc. and are characterized by evolution of large quantities of heat, intense release of toxic or flammable gas or vapour, sudden pressure build-up etc;(k)"manipulation" means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling using etc;(l)"approved personal protective equipment" means items of personal protective equipment

having certification by Indian Standards Institution or in the absence of it, personal protective equipment approved by the Chief Inspector;(m)"appropriate personal protective equipment" means that when the protective equipment is used by the worker, he shall have no risk to his life or health or body; and(n)"confined space" means any space by reason of its construction, situation, as well as in relation to the nature of the work carried therein and where hazards to the persons entering into or working inside exist or are likely to develop during working

## Part II

General RequirementApplying to all the works in Appendix 'A'

**1. Housekeeping: (a) Any spillage of materials shall be cleaned up before further processing.**

(b)Floors, platforms, stairways, passages and gangways shall be kept free of obstructions.(c)There shall be provided easy means of access to all parts of the plant to facilitate cleaning.

**2. Improper use of Chemicals: No chemicals or solvents or empty containers containing chemicals or solvents shall be permitted to be used by workers for any purposes other than in the processes for which they are supplied.**

**3. Prohibition on the use of food etc.: No food, drink, tobacco pan or any edible item shall be stored or heated or consumed on or near any part of the plant or equipment.**

**4. Cautionary Notices and Instructions : (a) Cautionary Notices in a language understood by the majority of workers shall be prominently displayed at conspicuous and convenient places in all hazardous areas drawing the attention of all workers about the hazards to health, involving fire and explosion and any other hazard such as consequences of testing of materials or substances used in the process or using any contaminated container for drinking or eating, to which the workers' attention is to be drawn for ensuring their safety and health.**

(b)In addition to the above cautionary notice, arrangement shall be made to instruct and educate all the workers including illiterate workers about the hazards in the process including the specific hazards which they may be exposed to, in the normal course of their work. Such instructions and education shall also deal with the hazards involved in unauthorized and unsafe practices including the properties of substances used the process under normal conditions as well as abnormal conditions and the precautions to be observed against each and every kind of hazard. An undertaking from the workers shall be obtained with one month of their first employment and for

old workers employed, within one month of coming into operation of this Schedule to the effect that they have read or have been apprised of the contents of the cautionary notices and instructions, understood them and shall abide by them. The training and instructions to all workers and all supervisory personnel shall include the significance of different types of symbols and colours used on the labels stuck or printed on the various types of containers and pipe lines.

**5. Evaluation and provision of safeguards before the commencement of process: - (a) Before commencing any process or any experimental work or any new manufacture covered under Appendix 'A' all possible steps shall be taken to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions including the dangerous chemical reactions. The properties of the raw materials used, the final products to be made, and any by-products derived during manufacture, shall be carefully studied and provisions shall be made for dealing with any hazards including effects on workers, which may occur during manufacture.**

(b) Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken from the design stage to disposal stage for ensuring the safety as in sub-paragraph (a) above, shall be sent to the Chief Inspector at the earliest but in no case less than 15 days before commencing manufacture, handling or storage of any of the items covered under Appendix 'A' whether on experimental basis, or as pilot plant or as trial production, or as large scale manufacture. The said information in respect of existing factories shall be sent within one month of coming into operation of this Schedule. (c) The design, construction, installation, operation, maintenance and disposal of the buildings, plant and facilities shall take into consideration effective safeguards against all the safety and health hazards so evaluated. (d) The requirements under the sub-paragraphs (a) to (c) shall not act in lieu of or in derogation to, any other provisions contained in any other Act governing the work.

**6. Authorised entry: - Only authorised persons shall be permitted to enter any section of the factory or plant where any dangerous operations or processes are or are being carried on or where dangerous chemical reactions take or are taking place or where hazardous chemicals are stored or manipulated.**

**7. Examination of instruments and safety devices: - (a) All instruments and safety devices used in the process shall be tested before taking into use and after carrying out any repair to them and examined once in a month, by competent person. Records of such tests and examinations shall be maintained in a register, approved by the Chief Inspector.**



(b) All instruments and safety devices used in the process shall be operated daily or as often as it is necessary, to ensure its effective and efficient working at all times.

**8. Electrical installations: - All electrical installations used in any area of the processes covered in Appendix 'A' shall be of an appropriate type to ensure safety against the hazard prevalent in that area such as suitability against dust, dampness, corrosion, flammability and explosivity etc. and shall have certification by Indian Standards Institution or appropriate authority governing their construction and use for that area.**

**9. Handling and storage of chemicals: - (a) The containers for handling and storage of chemicals shall be of adequate strength taking into consideration the hazardous nature of the contents. They shall also be provided with adequate labelling and colour coding arrangements to enable identification of the containers and their contents indicating the hazards and safe handling methods and shall have certification by Indian Standards Institution. The instructions given in the label shall be strictly adhered to. Damaged containers shall be handled only under supervision of a knowledgeable and responsible supervisor and spillage shall be cleaned and rendered innocuous in a safe manner using appropriate means.**

(b) The arrangements for the storage of chemicals including charging of chemicals in reaction vessels and containers shall be such as to prevent any risk of fire or explosion or formation of toxic concentration of substances above the limits specified in Schedule II of the Act. (c) Without prejudice to the generality of the requirements in sub-paragraph (b) above, the arrangements shall have suitable ventilation facilities and shall enable the maintenance of safe levels in vessels and containers. Such arrangements shall also take into consideration, the type and capacity of flooring and the compatibility requirements of substances with other chemicals stored or manipulated nearby. (d) (i) Storage of chemicals and intermediate products, which are highly unstable or reactive or explosive shall be limited to the quantities for two months use. (ii) Whenever the quantities laid down in the clause (i) are to be exceeded, prior permission of the Chief Inspector shall be obtained. (iii) Notwithstanding anything contained in clauses (i) and (ii) above, the Chief Inspector may direct any factory carrying out any or more of the processes covered in Appendix 'A' to further limit the storage of hazardous substances to quantities less than two months use on considerations of safety. (e) Stand by arrangements equal to the biggest container shall always be available to transfer the toxic substances quickly into the standby storage facility, if any defect develops in any of the containers used resulting in the release of toxic substances. (f) Any storage facility constructed using non-metallic material such as fiberglass, reinforced plastics, all glass vessels etc., shall have adequate strength to withstand the stress, if any, exerted by the contents and shall be properly anchored. Working platforms, access ladders, pipe lines etc. used in such storage facility shall not have any support on the structure of the storage facility and shall be independently supported.

**10. Facility for isolation: - The plant and equipment shall be so situated, constructed and maintained as to enable quick isolation of plant or part of plant or equipment, with appropriate indication. One copy of the layout plan indicating the isolation facilities shall always be available with the security personnel, the maintenance and the health and safety personnel and these isolation facilities shall be checked for their effectiveness once in a month.**

**11. Personal protective equipment: - (a) All workers exposed to the hazards in the processes covered by this Schedule shall be provided with appropriate and approved type of personal protective equipment. Such equipment shall be in a clean, sterile and hygienic condition before issue.**

(b)Effective arrangements shall be made to inform, educate and supervise all the workers in the use of personal protective equipment while engaged or carrying out their respective jobs.(c)As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector shall be final.

**12. Alarm System: - (a) Suitable and effective alarm systems giving audible and visible indications, shall be installed at the control room as well as in all strategic locations where process control arrangements are available so as to enable corrective action be taken before the operational parameters exceed the predetermined safe levels or lead to an emergency to occur. Such alarm systems shall be checked daily and tested every month at least once to ensure its performance efficiency at all times.**

(b)The Chief Inspector may direct such system to be installed in case of plants or processes where toxic materials are being used and spillage or leakage of which may cause widespread poisoning in or around the plant.

**13. Control of escape of substances into the work atmosphere: - (a) Effective arrangements such as enclosure or bypass or efficient exhaust draught, maintenance of negative pressure etc. shall be provided in all plants, containers, vessels, sewers, drains, flues, ducts, culverts and buried pipes and equipment, to control the escape and spread of substances which are likely to give rise to fire or explosion or toxic hazards during normal working and in the event of accident or emergency.**

(b)In the event of the failure of the arrangements for control resulting in the escape of substances in the work atmosphere, immediate steps shall be taken to control the process in such a manner that

further escape is brought down to the safe level.(c)The substances which may have escaped into the work atmosphere before taking immediate steps as required in sub-paragraph (b). shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.

**14. Control of dangerous chemical reactions: - Suitable provisions such as automatic and or remote control arrangements, shall be made for controlling the effects of 'dangerous chemical reactions'. In the event of failure of control arrangements, automatic flooding or blanketing or other effective arrangements shall be put into operation.**

**15. Testing, examination and repair of plant and equipment. - (a) All parts of plant, equipment and machinery used in the process which, in the likely event of their failure, may give rise to an emergency. shall be tested by a competent person before commencement of the process and retested at an interval of two years or after carrying out repairs to it. The competent person shall identify the parts of the plant, equipment and machinery required to be tested as aforesaid and evolve suitable testing procedures. In carrying out the said test in respect of pressure vessels or reaction vessels, the following precautions shall be observed, namely:-**

(i)before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally also for surface defects, corrosion and foreign matters. During the process of cleaning and removal of sludge, if any, all due precautions shall be taken against fire or explosion or toxic atmosphere if such sludge is of pyrophoric nature or contains spontaneously combustible or toxic chemicals;(ii)as soon as the test is completed, the vessels shall be thoroughly dried internally and shall be clearly stamped with the marks and figures indicating the person by whom testing has been done and the date of test; and(iii)any vessel which fails to pass the test or which, for any other reason, is considered or found to be unsafe for use, shall be destroyed or rendered unusable under intimation to the Chief Inspector.(b)All parts of plant, equipment, machinery which, in the event of failure, may give rise to an emergency shall be examined once in a month by the competent person.(c ) Records of testing and examination referred to in sub-paragraphs (a) and (b), shall be maintained as long as that part of the plant, equipment and machinery are in use and kept available to Inspector at all times during working of the factory.(d)All repair work including alteration, modification and addition to be carried out to the plant, equipment and machinery shall be done under the supervision of a responsible person who shall evolve a procedure to ensure safety and health of persons doing the work. When repair or modification is done on pipelines, and joints are required to be welded, but welding of joints shall be preferred. Wherever necessary the responsible person shall regulate the aforesaid work through a 'permit to work system'.(b)Staging shall not be erected over any closed or open vessel unless the vessel is so constructed and ventilated as to prevent exposure of workers to emergency while working on the

stages.(c)All stagings shall have appropriate access which is safe and shall be fitted with proper hand rails to a height of one metre and the board on the exposed sides.

**16. Staging. - (a) All staging erected for the purpose of maintenance work or repair work or for work connected with entry into confined spaces or use in the processes included in Appendix 'A' shall be stable, rigid and constructed out of substantial material of adequate strength. Such staging shall conform to the respective Indian Standard specifications.**

**17. Seating arrangements. - The seating arrangements provided for the operating personnel working in process covered in Appendix 'A' shall be located in a safe manner as to prevent the risk of exposure to toxic, flammable and explosive substances evolved in the work confinement in the course of manufacture or repair or maintenance, either due to failure of plant and equipment or due to the substances which, under pressure or otherwise, escape into the atmosphere.**

**18. Entry into or work in confined spaces: - (a) In every factory to which the provisions of this Schedule apply. the observance of the following precautions shall be ensured before permitting any worker to enter or work inside the confined spaces, namely;**

(i)all confined spaces and the nature of hazards that are to be encountered in such spaces, normally or abnormally shall be identified, and arrangement shall be made to develop the most appropriate safeguards for ensuring the safety and health of workers entering into or working inside the confined spaces;(ii)the entry or work inside the confined spaces shall be regulated through a permit to work system which shall include the safeguard so developed as required under sub-clause (i) above;(iii)before testing the confined space for entry into or work, it shall be rendered safe by washing or cleaning with neutralizing agents or purging with steam or inert gas and making adequate forced ventilation arrangements or such other measure which shall render the confined space safe;(iv)arrangement shall be made to carry out such tests as are necessary for the purpose by a competent person to ensure that the confined space is safe for the workers to enter or work. Such testing shall be carried out as often as is necessary during the course of work to ensure its continued safety; and(v)arrangement shall be made to educate and train the workers who are required or allowed to work in confined spaces about the hazards involved in the work, as also, to keep in readiness the appropriate and approved personal protective equipment including arrangement for rescue. resurrexion and first aid and supervision of the work at all times by a responsible and knowledgeable person shall be arranged.(b)A log book of all entry into or work in confined spaces shall be maintained and such record shall contain the details of workers assigned for the work, the location of the work and such other details that have a bearing on the safety and health of the persons assigned for this work. The log book so maintained shall be retained as long as the

concerned workers are in service and produced to the Inspector when demanded, at all times during working of the factory.

**19. Maintenance work etc. - (a) All the works connected with the maintenance of plants and equipment including cleaning of empty containers which have held hazardous substances used in the processes covered in this Schedule, shall be carried out under 'permit to work system' employing trained personnel and under the supervision of responsible person, having knowledge of the hazards and precautions required to deal with them.**

(b) Maintenance work shall be carried out in such a manner that there is no risk to the workers, in the vicinity, or who pass by, if necessary the place of such work shall be cordoned off or the presence of unconnected personnel effectively controlled.

**20. Permit to work system. - The 'permit to work system' shall inter-alia include the observance of the following precautions while carrying out any specified work to be subjected to the permit to work system,**

(a) all works subject to the permit to work system shall be carried out under the control and direct supervision of a knowledgeable and responsible person; (b) all parts of plant or machinery or equipment on which permit to work system is carried out, shall remain isolated from the other parts throughout the period of permit to work and the place of work including the parts of plant, machinery shall be rendered safe by cleaning, purging, washing etc., as may be necessary; (c) all work subject to the permit to work system shall have predetermined work procedures which integrate safety with the work. Such procedures shall be reviewed whenever any change occurs in material or equipment so that continued safety is ensured; (d) it shall be ensured that workers who are assigned to carry out the permit to work system are physically fit in all respects taking into consideration the demands and nature of the work before allowing or requiring entry or work into the confined space. Such workers shall be adequately informed about the work procedures as well as the precaution to be observed while carrying out the permit to work system. (e) adequate rescue arrangements wherever considered necessary, and adequate first aid rescue and resuscitation arrangement available in good working condition near place of work while carrying out the permit to work system, for use in emergency; (f) appropriate personal protective equipment duly certified by Indian Standards Institute be provided and used while carrying out 'permit to work system'; (g) after completion of work subject to the 'permit to work system' the person responsible for control and supervision shall ensure to remove all the equipments and tools and restore to the original condition so as to prevent danger while carrying out regular process.

**21. Safety sampling personnel: - The safety of persons assigned for collecting samples shall be ensured by instructing them on the safe procedure. Such personnel shall be provided with proper and approved personal protective equipment, if acquired.**

**22. Ventilation - Adequate ventilation arrangement shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances to be evolved. These arrangements shall ensure that Concentrations which are either harmful or may result in explosion are not permitted to be built up in the work environment.**

**23. Procedures for meeting emergencies: - (1) In every factory carrying out the words covered in Appendix 'A' necessary arrangement shall be provided to identify all types of possible emergencies that may occur in the processes during the course of work or while carrying out maintenance work or repair works. The emergencies so identified shall be reviewed every year.**

(2)A detailed plan shall be formulated all such identified emergencies including arrangements for summoning outside help for rescue and fire fighting and for making available urgent medical facilities.(3)The list of emergencies and the details of procedures and plans formulated to meet the emergencies shall be submitted to the Chief Inspection Inspector.(4)Provisions shall be made to install distinctive and recognizable warning arrangements to caution all persons inside The plant as well as the neighbouring community, if necessary, to enable evacuation of persons and to enable the observance of emergency procedure by the persons who are assigned emergency duties. All concerned shall be well informed about the warning arrangements and their meaning. The arrangements must be checked for its effectiveness every month.(5)Alternative power supply arrangement shall be made and interlocked with the normal power supply system so as to ensure constant supply of power to the facilities and equipment meant for compliance with the requirements of paragraph 10, 11, 12, 13, 14, 18, 22 and this paragraph of Part-II and the requirements of Part III, Part-IV and Part-V of this Schedule.(6)Arrangement shall be made to suspend the further process work in a place where emergency is established and to evacuate forthwith all persons in that area except the workers who have been assigned emergency duties.(7)All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.(8)All emergency procedures shall be rehearsed every three months and deficiencies, if any, in the achievement of the objectives shall be suitably corrected.(9)Arrangement shall be made to have ten percent of the workers trained in the use of first aid, fire fighting appliances and in the rendering of specific first aid measures taking into consideration then special hazards of the particular process.(10)The specific chemical identity of the hazardous substance shall be furnished immediately, on request, to the treating physician when the information is needed to administer proper emergency of first aid treatment to exposed persons.

**24. Danger due to effluents - (1) Adequate precautions shall be taken to prevent the mixing of effluents from different processes and operations which may cause dangerous or poisonous gas to be evolved.**

(2)Effluents which contain or give rise to the presence of other effluents to poisonous gas shall be provided with independent drainage systems to ensure that they may be trapped and rendered safe.

## Part III

### Fire and Explosions Risks

**1. Sources of ignition including lighting installation. - (a) No internal combustion engine and no electric motor or other electrical equipment, and fittings and fixtures capable of generating sparks or otherwise causing combustion and any other source of ignition or any naked light shall be installed and/or permitted to be used in the process area where there may be fire and explosion hazards**

(b) All hot exhaust pipe shall be installed outside a building and other hot pipes or hot surface or surfaces likely to become hot shall be suitably protected. (c) The classification of work areas in terms of their hazard potential and the selection of electrical equipment or other equipment that could constitute a source of ignition shall be in accordance with the respective Indian Standard. (d) (i) Where a flammable atmosphere may be prevalent or may occur in an area, the soles of footwear worn by workers shall have no metal on them; (ii) the wheels or trucks or conveyors shall be of conductive type; and (iii) All tools and appliances used for work in this area shall be of non-sparking type. (e) Smoking in process area, where there are risks of fire and explosion, shall be prohibited and warning notices in the language understood by the majority of workers shall be displayed at conspicuous and convenient places in the factory prohibiting smoking or carrying of matches or of any ignitable sources into specified areas.

**2. State Electricity - (a) All machinery and plant, particularly pipe lines and belt drives, on which static charge is likely to accumulate, shall be effectively earthed. Receptacle for flammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary humidity shall be regulated.**

(b) Mobile tankers and tanker wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that earthing is effective before such filling or discharge takes places.

**3. Lighting protection - Lighting protection arrangement shall be maintained.**

**4. Process heating - The method of providing heat for a process likely to result in fire and explosion shall be as safe as practicable and, where the use of naked flame is necessary, the plant shall be so constructed, maintained and operated as to prevent any escaping of flammable gas, vapour or dust coming into contact with flame or exhaust gas or other sources likely to cause ignition. Wherever possible, the heating arrangement shall be**

**automatically controlled at a pre-determined temperature below the danger temperature.**

**5. Leakage of flammable liquids: (a) Provisions shall be made to confine, by means of band was, dykes. sumps etc.. possible leakage from strong vessels containing flammable liquids.**

(b)Waste material in contact or seaked with flammable substances shall be disposed off suitably under the supervision of knowledgeable and responsible person.(c)Adequate and suitable fire-fighting appliances shall be installed in the vicinity of such vessels.

**6. Safety vales: Every still and every closed vessel in which gas is involved or into which gas is passed, and in which the pressure is liable to rise above the atmospheric pressure, shall have attached to it a pressure gauge and proper safety valve or other equally efficient means to relieve the pressure. These appliances shall be maintained in good working condition.**

**7. Installation of pipe line etc.: All pipe lines carrying flammable or explosive substances shall be protected from mechanical damage and shall be examined by a responsible person once in a week to detect any determination or defects or accumulation of flammable or explosive substances and record kept of the dates of examination, any defects found and repairs made. Such records shall be kept available to the Inspector at all times during working of the factory.**

**8. Fire fighting systems: (a) In every factory employing 500 or more workers and carrying out process listed in Appendix 'A'. there shall be provided-**

(i)trained and responsible fire fighting squad so as to effectively handle the fire fighting and life saving equipment in the event of fire or other emergency. Number of persons in this squad shall necessary depend upon- the size of risk involved, but in no case shall be less than 8 such trained persons to be available at any time. The squad shall consist of watch and ward personnel, fire pumpman. departmental supervisors and operators trained in the operation of fire and emergency services;(ii)Squad leaders shall preferably be trained in a recognized government institution and their usefulness enhanced by providing residence on the premises;(iii)Squad personnel shall be provided with clothing and equipment including helmets. boot and belts.(b)A muster roll showing the duties allocation to each member of the squad shall be prepared and copies supplied to each leader as well as displayed at conspicuous and convenient places so as to be easily available for reference in case of emergency.(c)The squad personnel shall be thoroughly conversant with location of all appliances and responsible for maintaining all fire fighting equipment in proper working



order. Any defect coming to notice shall be immediately brought to the notice of squad leader and rectified forthwith.(d)As far as practicable, the fire pump room the main gate(s) of the factory be connected to all manufacturing or storing area through telephone interlinked and placed in convenient location near such areas.

## **Part IV – Risks of Toxic Substances**

**1. Leakage: (a) All plants shall be of such design and construction as to prevent the escape of toxic substance. Where necessary, separate buildings, rooms or protective structures shall be used for the dangerous stage of the process and the buildings shall be so designed as to localise any escape of toxic substances.**

(b)Catch pits, bund wall, dykes or other suitable safeguards shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipelines where there is danger involved to maintenance and other workers from such leakage.

**2. Drainage: Adequate drainage shall be so provided as to lead to collection tanks specially provided for this purpose wherein deleterious material shall be neutralized, treated or otherwise rendered safe before it is discharged into public drains or sewers.**

**3. Covering of vessels: (a) Every fixed vessel or structure containing any toxic substances and not so covered as to eliminate all reasonable risk of accidental contact of any portion of the body of a worker, shall be so constructed as to avoid physical contact.**

(b)Such vessel shall, unless its edge is at least one meter above adjoining ground or platform, by securely fenced to a height of at least one metre above such adjoining ground or platform.(c)Where such vessels adjoin and the space between them, clear of an), surrounding brick or other work is either less than 45 centimeters in width or is 45 or more centimeters in width, but is not securely fenced on both sides to a height of at least one metre; secure barriers shall be so placed as to prevent passage between them:Provided that sub-paragraph (b) shall not apply to :(i)saturators used in the manufacture of sulphate of ammonia; and(ii)that part of the sides of brine evaporating pans which require raking, drawing or filling.

**4. Continuous exhaust arrangement: (a) Any process evolving toxic vapour, gas, fume and substances shall have efficient continuous exhaust draught. Such arrangement shall be interlocked in the process control, wherever possible.**

(b) In the event of failure of continuous exhaust arrangement, means shall be provided to automatically stop the process.

**5. Work Bench: All the work benches used in processes involving the manipulation of toxic substances, shall be graded properly and shall be made of smooth impervious surface which shall be washed daily after the completion of work.**

**6. Waste disposal: (a) There shall be provided a suitable receptacle made of non-absorbing materials with a tightly fitting cover for depositing waste material soiled with toxic substances and the contents of such receptacle shall be destroyed by burning or using other suitable methods under the supervision of a responsible and knowledgeable person.**

(b) During the course of manufacture, whenever any batch or intermediate products having toxicity is rejected on consideration of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactive them, before disposal. (c) The empty containers of toxic substance shall be cleaned thoroughly before disposal under the supervision of a responsible person.

## **Part V**

### **Special Provisions**

**1. Special precautions for Nitro or Amino Processes. - (a) Unless the crystallised nitro or amino substances of any of its liquor is broken or agitated in a completely enclosed process so as not to give rise to dust or fume, such process shall be carried on under an efficient exhaust draught or by adopting any other suitable means in a such a manner as to prevent the escape of dust or fume in the working atmosphere.**

(b) No part of the plant or equipment or implement which was in contact with nitro or amino compounds shall be repaired, or handled unless they have been emptied and thoroughly cleaned and decontaminated. (c) Filling of containers with nitro or amino compounds shall be done only by using a suitable scoop to avoid physical contact and the drying of the containers in the stove shall be done in such a manner that the hot and contaminated air from the stove is not drawn into the work room. (d) Processes involving the steaming into or around any vessel containing nitro or amino compounds or its raw materials shall be carried out in such a manner that the steam or vapour is effectively prevented to be blown back into the working atmosphere. (e) Suitable antidotes such as methylene blue injections shall always be available at designated places of work for use during emergency involving the poisoning with nitro or amino compounds.

**2. Special precautions for processes carried out in glass vessels. - (a)**  
**Processes and chemical reactions such as manufacture of vinyl chloride, benzyl chloride etc. which are required to be carried out in glass vessels shall have suitable means like substantial wiremesh covering to protect persons working nearby in the event of breakage of glass vessel.**

(b)Any spillage or emission of vapour from the glass vessel due to breakage, shall be immediately inactivated or rendered innocuous by suitable means such as dilution with water or suitable solvents so as to avoid the risks of fire or explosion or health hazards".

**3. Special precautions for processes involving chlorate manufacture. - (a)**  
**Crystallisation, grinding or packing of chlorate shall not be done in a place used for any other purpose and such places shall have hard, smooth and impervious surface made of non-combustible material. The place shall be thoroughly cleaned daily.**

(b)The personal protective equipment like overall etc. provided for the chlorate workers shall not be taken from the place of work and they shall be thoroughly cleaned daily.(c)Adequate quantity of water shall be available near the place of chlorate process for use during fire emergency.(d)Wooden vessels shall not be used for crystallisation of chlorate or to contain crystallised ground chlorate.

## **Part VI**

### **Medical Requirements**

**1. Decontamination facilities - In all places where toxic substances are used in processes listed in Appendix 'A' the following shall be provided to meet an emergency;**

(a)fully equipped first aid box ;(b)readily accessible means of drenching with water workers, parts of body of workers and clothing of workers who have been contaminated with such toxic and corrosive substances and such means shall be in the following scale :

No of workers employed at any time	No of drenching showers
Upto 50 workers .....	2
Between 51 to 100 .....	3
101 to 200 .....	3 +1 for every 50 workers or part thereafter.
201 to 400 .....	5+1 for every 100 workers or part thereafter.
401 and above .....	7+1 for every 200 workers or part thereafter.

(c) a sufficient number of eye wash bottles with distilled water or suitable liquid, keep boxes or cupboards conveniently situated clearly indicated by a distinctive sign shall be visible at all times.

**2. Occupational Health Centre: - In all the factories carrying out processes covered in Appendix 'A' there shall be provided and maintained in good order an occupational Health Centre with facilities as per scale laid down hereunder:**

(a) For factories employing upto 50 workers (i) the services of a qualified medical practitioner-hereinafter known as Factory Medical Officer, available on a retainer basis, in his notified clinic near the factory for seeking medical help during emergency and to carry out the pre-employment and periodical medical examination as stipulated in paragraph 4 of this Part; (ii) a minimum of five persons trained in first aid procedures, amongst whom at least shall always be available during the working period; (iii) A fully equipped first aid box; (b) For factories employing 15 to 200 workers (i) the occupational Health Centre shall have a room having a minimum floor area of 15 sq.m. with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped; (ii) a part-time Factory Medical Officer shall be in over-all charge of the Centre, who shall visit the Factory at least twice in a week and whose services shall be readily available during emergencies; (iii) there shall be one qualified and dresser-cum-compounder on duty throughout the working period. (iv) a fully equipped first-aid box. (c) For factories employing above 200 workers :- (i) there shall be one full-time Factory Medical Officer for factories employing up to 500 workers and one more medical officer for every 1000 workers or part thereof; (ii) The Occupational Health Centre in this case shall have a minimum of 2 rooms each, having a minimum floor area of 15 sq.m. with floors and walls made of smooth, hard and impervious surface and shall be illuminated, ventilated and equipped; (iii) there shall be one trained nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period; (iv) the Occupational Health Centre in this case shall be suitably equipped to manage medical emergencies.

**3. Ambulance Van: - (a) In every factory carrying out processes covered in Appendix 'A', there shall be provided and maintained in good condition, a suitably constructed and fully equipped ambulance van as per Appendix IC" manned by a full-time driver-cum-mechanic and a helper, trained in first and for the purposes of transportation of serious cases of accidents or sickness unless arrangements for procuring such facility at short notice during emergencies have been ensured with the nearby hospital or other places. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and shall always be available near the Occupational Health Centre.**

(b) The relaxation to procure ambulance van from nearby places provided for in sub-paragraph (a), shall not be applicable to factories employing more than 500 workers.

**4. Medical examination. - (a) Workers employed in processes covered in Appendix 'A' shall be medically examined by a Factory Medical Officer in the following manner:**

(i)once before employment, to ascertain physical suitability of the person to do the particular job;(ii)once in a period of 6 months, to ascertain the health status of the workers; and(iii)the details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in a register in Form No.17.(b)Any finding of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying Surgeon, for his further examination of the concerned worker and communicating his findings within 30 days. If the Certifying Surgeon is of the opinion that the worker so examined is required to be suspended from the process for health protection, he shall direct the occupier accordingly, and the said worker shall not be employed in the same process. However, the person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case, the person affected shall be suitably rehabilitated: Provided that Certifying Surgeon on his own, may examine any other worker whom he feels necessary to be examined for ascertaining the suitability of his employment in the process covered in Appendix 'A' or for ascertaining the health status of any other worker and his opinion shall be final.(c)No worker shall be newly appointed without the certificate of fitness in Form 25, granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being appointed to work in the process covered in Appendix 'A', such worker shall have a right of appeal in this regard.(d)The worker suspended from the process owing to the circumstances covered in sub-paragraph (b), shall be employed again in the same process only after obtaining the fitness certificate from the Certifying Surgeon and after making entries to that effect in the health register in Form 17.

## **Part VII**

### **Additional Welfare Amenities**

**1. Washing facilities. - (a) There shall be provided and maintained in every factory for the use of all the workers taps for washing, at the rate of one tap for every 15 persons including liquid soap in a container with tilting arrangements and nail brushes or other suitable means for effective cleaning. Such facilities shall be conveniently accessible and shall be kept in a clean and hygienic condition.**

(b)If washing facilities as required above are provided for women, such facilities shall be separate for them and adequate privacy at all times shall be ensured in such facilities.

**2. Mess room facilities. - (a) In every factory carrying out any process covered in Appendix 'A' and employing 50 workers or more, mess room facilities which are well ventilated and provided with table and sitting facilities along with the provision of cold and hygienic drinking water shall be provided for use by the working in a shift.**

(b) Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clean and hygienic condition.

**3. Cloak room facilities. - (a) In every factory carrying out any process covered in Appendix 'A' cloak room facilities with lockers shall be provided for use by all the workers employed in the process. Each worker shall be provided with two lockers, one for work clothing and another separately for personal clothing and the lockers shall be such as to enable the keeping of the clothing in a hanging position.**

(b) The cloak room facilities so provided in pursuance of sub-paragraph (a) of paragraph-1. If it is not possible to locate the cloak room near the washing facilities, then the cloak room facilities shall have adequate and suitable arrangements for cleaning and washing.

**4. Special bathing facilities, - (a) The occupier of any factory carrying out the process covered under Appendix 'B' shall provide special bathing facilities for all the workers employed and such facilities shall be provided at the rate of 1 for 25 workers and part thereof, and shall be maintained in a clean and hygienic condition.**

(b) It shall be ensured that all the workers employed in the processes covered in Appendix 'B' take bath after the completion of the day or shift work using the bathing facilities so provided and such of those workers taking bath in any place other than the bathing facilities shall be effectively prevented. (c) Notwithstanding anything contained in sub paragraph (a) above, the Chief Inspector may require, in writing, the occupier of any factory carrying out any other process for which, in his opinion, bathing facilities are essential from the health point of view, to provide special bathing facilities.

## **Part VIII**

### **Duties of workers**

- 1. Every worker employed in the processes covered in Appendix 'A' and 'B' shall not make any safety device or appliance or any guarding or fencing arrangement, inoperative or defective and shall report the defective condition of the aforesaid arrangement as soon as he is aware of any such defect.**
- 2. Before commencing any work, all workers employed in processes covered in Appendix 'A' shall check their workplaces as well as the machinery, equipment or appliance used in the processes and report any malfunction or defect immediately to the supervisor or any responsible person of the management.**
- 3. All workers shall co-operative in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of this Schedule and shall always use the personal protective equipments issued to them in a careful manner.**
- 4. All workers employed in the processes covered in Appendix 'A' or Appendix 'B' shall not smoke the process area or storage area. If special facilities are provided by the management, only such facilities shall be available of.**
- 5. All workers employed in the processes covered in Appendix 'A', shall not remain in unauthorized place or carry out unauthorized work or improvise any arrangements or adopt short cut method or misuse any of the facilities, provided in pursuance of the Schedule, in such manner as to cause risk to themselves as well as to others employed.**
- 6. The workers shall not refuse undergoing medical examination as required under these rules.**

## **Part IX**

Restrictions on the employment of young persons under 18 year of age and women

- 1. The Chief Inspector may, by an order in writing, restrict or prohibit the employment of women and young persons under the age of 18 in any of the process covered in Appendix 'A' of this Schedule on considerations of health and safety of women and young persons.**

**2. Such persons who are restricted or prohibited from working in the process due to the order issued in pursuance of paragraph 1 above shall be provided with alternate work which shall not be detrimental to their health or safety.**

## **Part X**

### **Power of Exemptions**

**1. The State Government or, subject to the control of the State Government, the Chief Inspector may exempt from the compliance with any of the requirements of this Schedule partly or fully, any factory carrying out process covered in Appendix 'A', if he is satisfied that the compliance with any of the requirements is not necessary to ensure the safety and health of workers employed and suitable and effective alternate arrangements are available to any of the requirements covered in this Schedule.**

Appendix 'A' Any works or that part of works in which-(a)the manufacture, manipulation or recovery of any of the following is carried on :-(i)Sodium, Potassium, iron, aluminium, cobalt, nickel, copper, arsenic, antimony, chromium, zinc, Solenium Magnesium, cadmium, mercury, beryllium and the organic and inorganic salts, alloys, oxides and hydroxides;(ii)ammonia, ammonium hydroxide and salts of ammonium;(iii)The organic or inorganic compounds of sulphurous, sulphuric, nitric, nitrous, hydrochloric, hydrofluoric, hydroiodic, hydrosulphuric, hydrobromic, boric;(iv)Cyanogen compounds, cyanide compounds, cyanate compounds;(v)Phosphorous and its compounds other than organo phosphorous insecticides :(vi)chlorine;(b)hydrogen sulphide is evolved by the decomposition of metallic sulphides, or hydrogen sulphide is use in the production of such sulphides;(c)bleaching powder is manufactured or chlorine gas is produced in chloralkali plants;(d)(i)gas tar or coal tar of bitumen or shall oil asphalt or any residue of such tar is distilled or is used in any process of chemicals manufacture;(ii)tar based synthetic colouring matters or their intermediates are produced;(e)nitric acid is used in the manufacture of nitro compounds;(f)explosive are produced with the use of nitro compounds :(g)alphatic or arematic compounds or their metallic and non-metallic derivatives or substituted derivatives, such as chloroform, ethylene glycol, formaldehyde. benzyl chloride, phenol, methyl ethyl keytone peroxide, cobalt carbonyl, tungsten carbide etc. are manufactured or recovered.Appendix 'B'Concerning Special Bathing Accommodation in pursuance of paragraph 4 of Part VII.

**1. Nitro or amino processes.**

**2. Process of distilling gas or coal tar or processes of chemical manufacture in which tar is used.**



- 3. Process involving manufacture, manipulation, handling or recovery of cyanogens compound, cyanide compound, cyanate compounds.**
- 4. Processes involving manufacture of bleaching powder or production of chlorine gas in chloro-alkali plants.**
- 5. Manufacture, manipulation or recovery of nickel and its compounds.**
- 6. All processes involving the manufacture, manipulation or recovery of aliphatic or aromatic compounds or their derivatives or substituted derivatives.**

Appendix 'C' Ambulance shall have the following equipments :-General-An wheeled stretcher with folding and adjusting devices. Head of the stretcher must be capable of being tilted upward. Fixed suction unit with equipments. Fixed oxygen supply with equipments. Pillow with case. Sheets. Blankets. Towels. Emesis bag. Bed Pan. Urinal. Glass. Safety equipment-Flares with life of 30 minutes. Flood lights. Flash lights. Fire extinguisher dry powder type. Insulated gauntlets. Emergency care equipments :Resuscitation-Portable suction unit. Portable oxygen unit. Bag-valve-mask, hand operated artificial ventilation unit. Airways. Mouth gags Tracheostomy adaptors. Short spine board. I.V. Fluids with administration unit. B. P. manometer. Cuff. Stethoscope. Immobilization-Long and short padded boards. Wire ladder splints. Triangular bandage. Long and short spine boards. Dressings-Gauze pads 10cm x 10cm Universal dressing-25 cm. x 90 cm. Roll of aluminium foils. Soft roller bandages 15 cm. x 4.5 M Adhesive tape in 7.5 roll. Safety pins. Bandage sheets. Burn sheet. Poisoning-Syrup of Ipecac. Prepacketed in doses Activated Charcoal Prepacketed in doses Snake bite kit. Drinking water. Emergency Medicines-As per requirements (under the advice of Medical Officer only).

### **XIX [Inserted vide Notification no. 1211-L.W./L.W./IR-1/67 dated 14th June, 1967]**

Manufacture, manipulation or storage of celluloid or any article wholly or partly made of celluloid

- 1. Application. - This scheme shall apply to all factories or parts thereof in which celluloid or any article wholly or partly made of celluloid is manufactured, manipulated or stored.**
- 2. Definition. - (a) "Work-room" means a room in which any process in the manufacture or celluloid or any process involving the use of celluloid is carried on.**

(b) "Fire resisting materials" means properly constructed brick work not less than 12.70 centimetres

in thickness, concrete not less than 7.60 centimetres in thickness, iron or steel or any other material the thickness of which is approved in writing by the Chief Inspector of Factories.

**3. Storage. - (1) Stocks of celluloid shall be kept in a suitable room outside the work-rooms, plainly marked "Celluloid Store", in which no open light, fire or heater shall be allowed and which shall not be used for storing any other material. Stocks of celluloid exceeding fifty kilograms shall be kept in a room constructed of fire resisting materials.**

(2)The store shall not be so situated as to endanger the means of escape from the factory or from any part thereof in the event of fire occurring in the store.(3)No unauthorised person shall be allowed to have access to the store.

**4. General precautions - (1) The amount of celluloid in a work-room at any one time shall be as small as practicable without interfering with the work carried on in the said room.**

(2)Celluloid waste created in the process carried on in a work-room shall not allowed to be accumulate on the floor or benches of the work-room, but shall be collected either automatically as created, or at frequent intervals, and shall be removed from the work-room and shall be placed in a metal receptacle provided with a cover and marked "Celluloid Waste"(3)Finished articles made wholly or partly of celluloid shall be removed from the work-room without undue delay and shall be kept in a separate store.

**5. Precautions against fire. - (1) Effective steps shall be taken to prevent celluloid from coming into contact with open lights, fires or heaters.**

(2)Only electricity, hot oil or steam shall be used for warming celluloid or heating celluloid moulding presses.(3)When celluloid is being sawn, drilled, milled or otherwise machined it shall be cooled with water as far as the nature of the operation allows.(4)No person shall be allowed to smoke or carry matches, fire or naked light or other means of producing naked light in the work-room or store-room.

**6. Fire Extinguishers. - (1) An adequate supply of efficient fire extinguishing appliances having regards to the amount of celluloid present in a work-room and in the celluloid store at any one time, shall be provided for every room and the store.**

(2)Every extinguisher shall be mounted in a position approved by the inspector and shall be accompanied by the maker's printed instructions for its use.(3)Every extinguisher shall be examined, tested and discharged periodically in accordance with the maker's recommendation.

**7. Fire escapes. - (1) Adequate means of escape in case of fire, including a sufficient number of emergency exits not fewer than two in number, shall be provided and maintained for every work-room and store-room. Such means of escape shall be kept free from obstruction during working hours. Exit doors unless they are of the sliding type, shall be constructed to open outwards.**

(2) Furniture and equipments in a work-room shall be so arranged and maintained that access to the means of escape is not impeded.

**8. Electric fittings. - All electric conductors shall be enclosed in metal conduits."**

**XX [Inserted vide Notification No. 143-L.W./L.W./IR-3/75 dated 9th February, 1976.]**

Manufacture, handling or use of benzene

**1. Application. - This schedule shall apply to all factories or parts thereof in which benzene or substances containing benzene are manufactured, handled or used.**

**2. Definitions. - For the purpose of this schedule-**

(a)'Substances containing benzene' means substances wherein benzene content exceeds 1 per cent by volume.(b)'Substitute' means a chemical which is harmless or less harmful than benzene and can be used in place of benzene.(c)'Enclosed System' means a system which will not allow escape of benzene vapours to the working atmosphere.(d)'Efficient exhaust draught' means localised ventilation effected by mechanical means for the removal of gases, vapours, dusts or fumes so as to prevent them from escaping into the air of any work-room. No draught shall be deemed to be efficient if it fails to remove such gases, vapours, fumes or dust at the point of origin.(e)'Work-room' means a room in which any process in manufacture, use or handling of benzene or substances containing benzene or any process involving the use of benzene or substances containing benzene is carried on.

**3. Prohibition and substitution. - (a) Benzene or substances containing benzene shall not be used as a solvent or diluent unless the process in which it is used, is carried on in an enclosed system or unless the process is carried on in a manner which, in the opinion of the Chief Inspector of Factories, is equally safe, as if it were carried out in an enclosed system.**

(aa)[ Use of benzene and substances containing benzene shall be prohibited in the following processes :- [Inserted by the West Bengal Factories (Amendment) Rules, 1991.](i)Manufacture of varnishes, paints and thinners; and(ii)cleaning and degreasing operation;](b)Where suitable substituted are available, they shall be used instead of benzene or substances containing benzene. This provision, however, shall not apply to the process specified in Appendix A to this Schedule.(c)The Chief Inspector may permit exemptions from percentage laid down in clause 2(a) and also from the provisions of sub-clause (b) temporarily under conditions and within limits of time to be determined after consultation with the employers and workers concerned.

**4. Protection against inhalation. - (a) The process involving the use of benzene or substances containing benzene shall as far as practicable be carried out in an enclosed system.**

(b)Where, however, it is not practicable to carry out the process in an enclosed system, the work-room in which benzene or substances containing benzene are used shall be equipped with an efficient exhaust draught or other means for the removal of benzene vapours to prevent their escape into the air of the work-room so that the concentration of benzene in the air does not excess 10 parts per million by volume or 80 mg/m<sup>3</sup>.(c)Air analysis for the measurement of concentration of benzene vapours in air shall be carried out every eight hours or at such intervals as may be directed by the Chief Inspector at places where process involving use of benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of benzene vapours in air as measured by air analysis exceeds 25 parts per million by volume or 30 mg/m<sup>3</sup>, the manager shall forthwith report the concentration to the Chief Inspector stating the reasons for such increase.(d)Workers who, for special reasons, are likely to be exposed to concentration of benzene in the air of work-room exceeding the maximum referred to in clause (b) shall be provided with suitable respirators or face masks. The duration of such exposure shall be limited as far as possible.

**5. Measures against skin contact. - (a) Workers who are likely to come in contact with liquid benzene or liquid substances containing benzene shall be provided with suitable gloves aprons, boots and where necessary vapour tight chemical goggles, made of material not affected benzene or its vapours.**

(b)The protective wear referred to in sub-clause (a) shall be maintained in good condition and inspected regularly.

**6. Prohibition relating to employment of women and young persons: - No woman or young person shall be employed or permitted to work in any work-room involving exposure to benzene or substances containing benzene.**

**7. Labelling. - Every container holding benzene or substances containing benzene shall have the work 'Benzene' and approved danger symbols clearly visible on it and shall also display information on benzene content, warning about toxicity and warning about inflammability of the chemical.**

**8. Improper use of benzene. - (a) The use of benzene or substances containing benzene by workers for cleaning their hands or their work-clothing shall be prohibited.**

(b) Workers shall be instructed on the possible dangers arising from such misuse.

**9. Prohibition of consuming food, etc., in work-rooms. - No worker shall be allowed to store or consume food or drink in the work-room in which benzene or substances containing benzene are manufactured, handled or used. Smoking and chewing tobacco, supari or pan shall be prohibited in such work-rooms.**

**10. Instructions as regards risks. - Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with an emergency.**

**11. Cautionary notices. - Cautionary notices in the form specified in Appendix B to this Schedule and presented in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the work-rooms.**

**12. Washing facilities, cloak-room and mess-room. - In factories in which benzene or substances containing benzene are manufactured, handled or used, the occupier shall provide and maintain in clean state and in good repair-**

(a) washing facilities under cover of the standard of at least one tap for every ten persons having constant supply of water with soap and clean towels; (b) a cloak-room with lockers for each worker, having two compartments-one for street-clothing and one for work-clothing; (c) a mess-room furnished with tables and benches with means for warming food, provided that where a canteen or other proper arrangements exist for the workers to take their meals, the requirements of mess-room shall be dispensed with

**13. Medical facilities and records of examinations and tests - (a) The occupier of every factory to which this Schedule applies shall-**

(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in sub-clause (i)(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**14. Medical examination by the Certifying Surgeon : - (a) Every worker employed in process mentioned in paragraph 1, shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for detection of phenol in urine and determination of urinary sulphide ratio and C.N.S. and haematological tests. No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said process shall be produced for re-examination by the Certifying Surgeon at least once in every twelve calendar months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests specified in clause (a). Every worker shall also be examined once in every three calendar months by the medical practitioner as employed under Sub-clause (i) of clause (a) paragraph 13.(c)The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under clauses (a) and (b), including the nature and the results of these tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(d)The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(e)If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said workers is unfit to work in the said process. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(f)No person who has been found unfit to work as mentioned in clause (e) shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination, again certified him fit for employment in those processes.Appendix - A[Clause 3 (b)]

## **1. Production of benzene.**

## **2. Process where benzene is used for chemical synthesis.**

## **3. Motor spirits (used as fuel).**

Appendix - B[Clause IV](a)The hazards -(i)Benzene and substances containing benzene are harmful.(ii)Prolonged or repeated breathing of benzene vapours may result in acute or chronic poisoning.(iii)Benzene can also be absorbed through skin which may cause skin and other diseases.(b)The preventive measures to be taken -(i)Avoid breathing of benzene vapours.(ii)Avoid prolonged or repeated contact of benzene with the skin.(iii)Remove benzene from soaked or wet clothing promptly.(iv)If at any time you are exposed to high concentration of benzene vapours and exhibit the sign and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your factory manager.(v)Keep all the containers of benzene closed.(vi)Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.(vii)Maintain good house-keeping.(c)The protective equipment to be used -(i)Use respiratory protective equipment in places where benzene vapours are present in high concentration.(ii)In emergency, use self-generating oxygen mask or oxygen or air cylinder masks.(iii)Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.(d)The first-aid measure to be taken in case of acute benzene poisoning -(i)Remove the clothing immediately if it is wet with benzene.(ii)If liquid benzene enters eyes, flush thoroughly for at least 15 minutes with clean running water and immediately secure medical attention.(iii)In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives do the following:If the exposed person is conscious -(i)Move him to fresh air in open place(ii)Lay him down without a pillow and keep him quiet and warm. If the exposed person is unconscious -(i)Lay him down preferably on the left side with the head low.(ii)Remove any false teeth, chewing-gum, tobacco or other foreign objects which may be in his mouth.(iv)In case of shallow breathing or cyanosis (blueness of skin, lips, ears, finger nail beds), he should be provided with medical oxygen or oxygen carbondioxide mixture. If needed, he should be given artificial respiration. Oxygen should be administered by a trained person only.

**XXI [Added by Notification No. 340 L.W./L.W./IR-4/85 dated 9th April 1986.]**

Process of extracting oils and fats from vegetables and animals sources in solvent extraction plants

## **1. Definitions. - For the purposes of this schedule -**

(a)"solvent extraction plant" means a plant in which the process of extracting oils and fats from vegetable and animal sources by use of solvents is carried on;(b)"solvent" means an inflammable liquid such as pentane, heXane and heptane used for the recovery of oils and fats from vegetable and animal sources;(c)"flame proof enclosure- as applied to electrical machinery or apparatus means an enclosure, that will withstand, when covers or other access doors are properly secured. an internal

explosion of the flammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating internal inflammation (or explosions) to the external flammable gas or vapour.

**2. Location and layout. - (a) No solvent extraction plant shall be permitted to be constructed or extended to within a distance of 30 metres from the nearest residential locality.**

(b) A continuous wire fencing 1.5 metres high shall be provided around the solvent-extraction plant upto a minimum distance of 15 metres from the plant. (c) No person shall be allowed to carry matches or an open flame or fire inside the area bound by the fencing. (d) Boiler houses and other buildings where open flame processes are carried on shall be located at least 30 metres away from the solvent extraction plant. (e) If godowns and preparatory processes are at a distance of less than 30 metres from the solvent extraction plant, these shall be at least 15 metres distant from the plant, and a continuous barrier wall of non-combustible material, 1.5 metres high shall be erected at a distance of not less than 15 metres from the solvent extraction plant so that it extends to at least 30 metres of vapour travel around its ends from the plant to the possible sources of ignition.

**3. Ventilation. - The solvent extraction plant shall be well ventilated and if the plant is housed in a building, the building shall be provided with mechanical ventilation with mechanical ventilation with provision for at least six air changes per hour.**

**4. Vapour detection. - A suitable type of flame-proof and portable combustible gas indicator shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various locations as approved by the Chief Inspector shall be drawn out and entered in a register maintained for the purpose.**

**5. Housekeeping. - (a) Solvents shall not be stored in an area covered by solvent extraction plant except in small quantities which shall be stored in approved safety cans.**

(b) Waste materials such as oily rags, other wastes and absorbents used to wipe off solvent and paints and oils shall be deposited in approved containers and removed from the premises at least once a day. (c) Space within the solvent extraction plant and within 15 metres from the plant shall be kept free from any combustible material and any spills of oil or solvent, shall be cleaned up immediately.



**6. Electrical Installations. - (a) All electrical motors and wiring and other electrical equipment installed or housed in solvent extraction plant shall be of flame proof construction.**

(b) All metal parts of the plant and building including various tanks and containers where solvents are stored or are present and all parts of electrical equipment not required to be energised shall be properly bonded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.

**7. Restriction on smoking. - Smoking shall be strictly prohibited with 15 metres distance from solvent extraction plant. For this purpose, 'No Smoking' signs shall be permanently displayed in the area.**

**8. Precautions against friction. - (a) All tools and equipment including ladders, chains and other lifting trackles required to be used in solvent extraction plant shall be of non-sparking type.**

(b) No machinery or equipment in solvent extraction plant shall be belt driven unless the belt used is of such a type that it does not permit accumulation of static electricity to a dangerous level. (c) No person shall be allowed to enter and work in the solvent extraction plant, if wearing clothes made of nylon or such other fibre that can generate static electrical charge, or wearing footwear which is likely to cause sparks by friction.

**9. Fire fighting apparatus. - (a) Adequate number of portable fire extinguishers suitable for use against flammable liquid fires shall be provided in the solvent extraction plant.**

(b) An automatic water spray sprinkler system on a wet pipe or open-head deluge system with sufficient supply of storage water shall be provided over solvent extraction plant and throughout the building housing such plant.

**10. Precaution against power failure. - Provision shall be made for the cutting off of steam in the event of power failure and also for emergency over-head water-supply for feeding water by gravity to condensers which shall come into play automatically with the power failure.**

**11. Magnetic separators. - Oil cake shall be fed to the extractor by a conveyor through a hopper and a magnetic separator shall be provided to remove any pieces of iron during its transfer.**

**12. Venting. - (a) Tanks containing solvents shall be protected with emergent venting to relieve excessive internal pressure in the event of fire.**

(b) All emergency relief vents shall terminate at least 6 metres above the ground and be so located that vapours will not re-enter the building in which solvent extraction plant is located.

**13. Waste water. - Process waste water shall be passed through a flast evaporator to remove any solvent before it is discharged into a sump which should be located within the fenced area but not closer than 8 metres to the fence.**

**14. Examination and repairs. - (a) The solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector with his observation as to whether or not the plant is in safe condition to work.**

(b) No repairs shall be carried out to the machinery or plant except under the direct supervision of competent person. (c) Facility shall be provided for purging the plant with inert gas before opening for cleaning or repairs and before introducing solvent after repairs.

**15. Operating personnel. - The operation of the plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.**

**16. Employment of women and young persons. - No woman or young person shall be employed in the solvent extraction plant.**

**17. Exemption. - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or in frequency of the process or for any other reasons, all or any of the provisions of this schedule is not necessary for the protection of the workers in the factory, he may by order in writing grant exemption which he may at his discretion revoke, to such factory from all or any of such provisions subject to conditions, as he may think fit.**

## **XXII [Added by Notification No. 340 L.W./L.W./IR-4/85 dated 9th April 1986.]**

Manufacture or manipulation of manganese and its compounds

**1. Application. - This schedule shall apply to every factory in which or in any part of which any manganese process is carried on.**

**2. Definitions. - For the purposes of this schedule -**

(a)"Manganese process" means processing, manufacture or manipulation of manganese or any compound of manganese or any ore or any mixture containing manganese;(b)"first employment" means first employment in any manganese process and includes also re-employment in any manganese process following any cessation of employment for a continuous period exceeding three calendar months;(c)"manipulation" means mixing, blending, filling, emptying, grindings, sieving, drying, packing, sweeping or otherwise handling of manganese or a compound of manganese, or any ore or any mixture containing manganese; and(d)"efficient exhaust ventilation" means localized ventilation effected by mechanical means for the removal of dust or fume or mist at its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove the dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a work place.

**3. Isolation of a process. - Every manganese process which may give rise to dust, vapour or mist containing manganese, shall be carried on in a totally enclosed system or otherwise effectively isolated from other processes so that other plants and processes and other parts of the factory and persons employed on other processes may not be affected by the same.**

**4. Ventilation of process. - No process in which any dust, vapour or mist containing manganese is generated shall be carried out except under an efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.**

**5. Personal protective equipment - (a) The occupier of the factory shall provide and maintain in good and clean condition suitable overalls and head coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.**

(b)The occupier of the factory shall provide suitable respiratory protective equipment for use by workers in emergency to prevent inhalation of dusts, fumes or mists. Sufficient number of complete sets of such equipment shall always be kept near the work place and the same shall be properly maintained and kept always in a condition to be used readily.(c)The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance of personal protective equipment.

**6. Prohibition relating to women and young persons. - No woman or young person shall be employed or permitted to work in any manganese process.**

**7. Food, drinks, etc., prohibited in the work-rooms. - No food, drink, pan and supari or tobacco shall be allowed to be brought into consumed by any worker in any work-room in which any manganese process is carried on.**

**8. Mess-room. - There shall be provided and maintained for the use of the persons employed in a manganese process a suitable mess-room which shall be furnished with sufficient tables and benches and adequate means for warming of food. The mess-room shall be placed under the charge of a responsible person and shall be kept clean.**

**9. Washing facilities. - There shall be provided and maintained in a clean state and in good condition, for the use of persons employed on manganese process -**

(a)a wash place under cover, with either -(i)a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every ten such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimetres: or(ii)at least one wash basin for every five such persons employed at any one time. fitted with a waste pipe and plug and having a constant supply of water; and(b)sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.

**10. Cloak-room. - If the Chief Inspector so requires there shall be provided and maintained for the use of persons employed in manganese process a cloak-room for clothing put off during working hours with adequate arrangements for drying the clothing.**

**11. Cautionary placard and instruction. - Cautionary notices in the form specified in the appendix and printed in the language of the majority of the workers employed, shall be affixed in prominent places in the factory where**

**they can be easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and the best preventive measure and methods to protect themselves. The notices shall always be maintained in a legible condition.**

## **12. [ Medical facilities and records of examinations and tests. -**

(a)the occupier of every factory to which this Schedule applies, shall -(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**12A. Medical examination by Certifying Surgeons. - (a) Every worker employed in any manganese processes shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such examination shall include test for detection of serum calcium, serumphosphate and manganese in blood and urine and also include sterness test and other neuro-muscular co-ordination test No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in a manganese process shall be produced for re-examination by a Certifying Surgeon at least once in every three calender months and such examination shall where the Certifying Surgeon consider appropriate, include all the tests in sub-paragraph (a) Certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the Certificate and the certificate shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon, in a health register in Form 17.(c)The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(d)If, at any time, the Certifying Surgeon is of the opinion that the worker is no longer fit for employment in the said process on the ground that continuance therein may involve special danger to the health of tie worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit to work in the said process. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(e)No worker who has been found unfit to

work as mentioned in sub-paragraph (d), shall be allowed or required to work in the said processes unless the Certifying Surgeon after further examination, again certifies him fit for employment in those processes.]

**13. Exemption.** - If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or infrequency of the process, or for any other reason, application of all or any of the provisions of this schedule is not necessary for the protection of the persons employed in such factory he may, by an order in writing which he may at his discretion revoke. exempt such factory from all or any of the provisions on such conditions and for such period as he may specify in the said order.

#### Appendix Cautionary Notice Manganese and Manganese Compounds

- 1. Dust, fumes and mists of manganese and its compounds are toxic when inhaled or when ingested.**
- 2. Do not consume food or drink in or near the work place.**
- 3. Take a good wash before taking meals.**
- 4. Keep the working area clean.**
- 5. Use the protective clothing and equipment provided.**
- 6. When required to work in situations where dusts, fumes or mists are likely to inhaled, use respiratory protective equipment provided for the purpose.**
- 7. In case of sickness like headache, prolonged sleeplessness or abnormal sensations on the body, report to the manager who would make necessary arrangements for your examination and treatment.**

## **XXIII**

#### Manufacture or manipulation of dangerous pesticides

**1. Application.** - This schedule shall apply in respect of all factories or any part thereof in which the process of manufacture or manipulation of dangerous pesticide hereinafter referred to as the said manufacturing

**process, is carried on.**

## **2. Definitions. - For the purpose of this schedule -**

(a)"dangerous pesticide" means any product proposed or used for controlling, destroying or repelling any pest or for preventing growth or mitigating effects of such growth including any of its formations which is considered toxic under and is covered by, the Insecticides Act, 1968 and the rules made thereunder and any other product, as may be notified from time to time by the State Government;(b)"manipulation" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling;[xxx] [Omitted by Amendment Rules, 1991](d)"first employment' shall mean first employment in any manufacturing process to which this schedule applies and shall also include re-employment in the said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months; and(e)"suspension" means suspension from employment in any process wherein a dangerous pesticide is manipulated, by written certificate in the health register in Form 17 signed by the Certifying Surgeon who shall be competent to suspend all persons employed in such process.

## **3. Ventilation. - (a) In every work-room or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.**

(b)Unless the process is completely enclosed, the following operations during manipulation of dangerous pesticide shall not be undertaken without an efficient exhaust draught.(i)emptying a container holding a dangerous pesticide;(ii)blending a dangerous pesticide;(iii)preparing a liquid or powder formation containing a dangerous pesticide; and(iv)changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.(c)In the event of a failure of the exhaust draught provided on the above operation, the said operation shall be stopped forthwith.

## **4. Manipulation not to be undertaken. - Manufacture or manipulation of a pesticide shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.**

## **5. Manual handling. - (a) A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of a long handled scoop.**

(b)Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

**6. Prohibition relating to employment of women or young persons. - No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or in any room in which dangerous pesticide is stored.**

**7. Instruction to workers. - Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemicals handled in the said manufacturing process and the hazards involved. The employees shall also be instructed in the measures to be taken to deal with any emergency. Such instructions shall be repeated periodically.**

**8. Cautionary notices and placards. - Cautionary notices and placards in the form specified in appendix to this schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangement's shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing process and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for protecting health of the workers.**

**9. Protective clothing and protective equipment. - (a) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head coverings shall be provided for all workers employed in the said manufacturing process.**

(b)(i)Protective equipment consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles and respirators shall be provided for all workers employed in the said manufacturing process.(ii)Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.(c)Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.(d)Protective clothing and equipment shall be washed daily from inside and outside of the workers handling pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides.(e)Protective clothing and equipment shall be maintained in good repair.

**10. Floors and work-benches. - (a) Floors in every work-room where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.**



(b) Floor shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe. (c) Work-benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

**11. Spillage and waste. - (a) If a dangerous pesticide during its manipulation splashes or spills on the work-bench, floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas of articles.**

(b) Cloth, rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in a suitable receptacle with tight fitting cover. Contaminated waste shall be destroyed by burning at least once a week. (c) Suitable deactivating agents, where available, shall be kept in a readily accessible place for use while attending to a spillage. (d) Easy means of access shall be provided to all parts of the plant for cleaning maintenance and repairs.

**12. Empty containers used for dangerous pesticides. - Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or destroyed.**

**13. Food, drinks, and smoking prohibited. - (a) Tobacco, pan, or supari shall be brought into or consumed by any worker in any work-room in which the said manufacturing process is carried out.**

(b) Smoking shall be prohibited in any work-room in which the said manufacturing process is carried out.

**14. Mess Room. - (a) There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, a suitable mess-room which shall be furnished with**

(i) sufficient tables and benches with back rest; and (ii) adequate means for warming food. (b) The mess-room shall be placed under the charge of a responsible person and shall be kept clean.

**15. Time allowed for washing. - (a) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.**

(b) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.

**16. Washing and bathing facilities. - (a) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.**

(b) The washing places shall have standpipes placed at intervals of not less than one metre. (c) Not less than one half of the total number of washing places shall be provided with bathrooms. (d) Sufficient supply of clean towels made of suitable materials shall be provided. (e) Sufficient supply of soap and nail brushes shall be provided.

**17. Cloak-room. - There shall be provided and maintained for the use of all worker employed in the factory where the said manufacturing process is carried on-**

(i) a cloak-room for clothing put off during working hours with adequate arrangements for drying clothing, if wet; and (ii) separate and suitable arrangements for storage of protective clothing provided under paragraph 9.

**18. [ Medical facilities and records of examinations and tests : - (a) The occupier of every factory to which this Schedule applies, shall**

(i) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i). (b) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**19. Medical examination by Certifying Surgeon - (a) Every worker employed in the processes mentioned in paragraph 1, shall be produced for examination by the Certifying Surgeon within 15 days of his first employment. Such examination in respect of Halogenated Pesticides, shall include tests for determination of the chemical in blood and in fat tissues, EEG abnormalities and memory tests. In respect of organo phosphorous compounds, such examinations shall include test for depression of cholinesterase in plasma and red blood-cells. No worker shall be allowed or**

**required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the said process shall be produced for re-examination by a Certifying Surgeon at least once in every six calendar months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include the tests specified in sub paragraph (a) . Every worker employed in the said processes shall also be examined once in every three months by the medical practitioner employed under sub-clause (i) of clause (a) of Paragraph 18. (c) The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b), including the nature and the results of these tests, shall also be entered by the Certifying Surgeon in a health register in Form 17. (d) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit to work in the processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (f) No worker who has been found unfit to work as said in sub-paragraph (e), shall be allowed or required to work in the said process unless the Certifying Surgeon, after further examination, again certifies him for employment in those processes.]

**20. Exemption. - If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or the infrequency of the said manufacturing process or for any other reason which he shall record in writing, all or any of the provision of this schedule are not necessary for the protection of the workers employed in the factory, he may by a certificate in writing exempt such factory from all or any of the provisions on such condition as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector after recording his reasons therefore.**

Appendix Cautionary Notice Insecticides and pesticides.

**1. Chemicals handled in this plant are poisonous substances.**

**2. Smoking, eating food or drinking, chewing tobacco in this area is prohibited. No foodstuff or drink shall be brought in this area.**

- 3. Some of these chemicals may be absorbed through skin and may cause poisoning.**
- 4. A good wash shall be taken before meals.**
- 5. A good bath shall be taken at the end of the shift.**
- 6. Protective clothing and equipment supplied shall be used while working in this area.**
- 7. Containers of pesticides shall not be used for keeping foodstuff.**
- 8. Spillage of the chemicals on any part of the body or on the floor or work-bench shall be immediately washed away with water.**
- 9. Clothing contaminated due to splashing shall be removed immediately.**
- 10. Scrupulous cleanliness shall be maintained in this area.**
- 11. Do not handle pesticides with bare hands, use scoops provided with handle.**
- 12. In case of sickness like nausea, vomiting, giddiness, the manager should be informed who would make necessary arrangements for examination and treatment.**
- 13. All workers shall report for the prescribed medical tests regularly to protect their own health.**

## **XXIV**

Manufacture or manipulation of carcinogenic dye intermediates

**1. Application. - The schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraphs 3 and 4 are formed, manufactured, handled, or used and the processes incidental thereto in the course of which these substances are formed, are carried on. The processes indicated in this paragraph shall be referred to hereinafter as "the said processes", and such a reference shall**

**mean any or all processes described in this paragraph.**

**2. Definition. - For the purpose of this schedule the following definitions shall apply, unless the context otherwise requires -**

(a)"controlled substances" means chemical substances mentioned in paragraph 4 of this schedule;(b)"prohibited substances" means chemical substances mentioned in paragraph 3 of this schedule;(c)"first employment" means first employment in the said processes and also re-employment in such processes following any cessation of employment for continuous period exceeding three calendar months; and(d)"efficient exhaust draught" means localized ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originates.

**3. Prohibited substances. - For the purpose of this schedule, the following chemical substances shall be classified as "prohibited substances" except when these substances are present or are formed as a bye-product of a chemical reaction in a total concentration not exceeding one per cent :-**

(a)beta-naphthylamine and its salts;(b)benzidine and its salts;(c)4-amino diphenyl and its salts;(d)4-notrodiphenyle and its salts; and(e)any substance containing any of these compounds.

**4. Controlled substances. - For the purpose of this schedule, the following chemical substances shall be classified as "controlled substances" :**

(a)alpha-naphthylamine or alpha-naphthylamine containing not more than one per cent of beta-naphthylamine either as a bye-product or chemical reaction or otherwise, and its salts;(b)ortho-tolidine and its salts;(c)dianisidine and its salts;(d)dichlorobenzidine and its salts;(e)auramine; and(f)magneta.

**5. Prohibition relating to employment of women and young persons. - No woman or young person shall be employed or permitted to work in any room in which the said processes are carried on.**

**6. Prohibition of employment. - No person shall be employed in the said process in any factory in which any prohibited substance is formed, manufactured, processed, handled, or used except as exempted by the Chief Inspector as stipulated in paragraph 23.**

**7. Restriction on age of persons employed. - No worker under the age of 40 years shall be engaged in the factory of the said processes for the first time after the date on which the schedule comes into force.**

**8. Requirements for processing or handling controlled substances. - (a) Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used all practical steps shall be taken to prevent inhalation, ingestion or absorption of the said controlled substance by the workers while engaged in processing that substance, and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.**

(b) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process. (c) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when these substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labelled to indicate the contents.

**9. Disposal of empty containers. - Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.**

**10. Manual handling. - Controlled substances shall not be allowed to be mixed, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily.**

**11. Floor of work-rooms. - The floor of every work-room in which the said processes are carried on shall be (a) smooth and impervious to water provided that asphalt or tar shall not be used in the composition of the floor, (b) maintained in a state of good repair, (c) with a suitable slope for easy draining and provided with gutters, and (d) thoroughly washed daily with drain water being led into a sewer through a closed channel.**

**12. Personal protective equipment. - (a) The following items of personal protective equipment shall be provided and issued to every worker employed in the said processes :-**

(i) long trousers and shirts or overalls with full sleeves and head covering. The shirt or overall shall cover the neck completely; and (ii) rubber gum-boots. (b) The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said processes when there is danger of injury during the performance of normal duties or in the event of emergency: (i) rubber hand-gloves; (ii) rubber aprons; and (iii) airline respirators or other suitable respiratory protective equipment. (c) It shall be the responsibility of the manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.

**13. Washing and bathing facilities. - (a) The following washing and bathing facilities shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said processes:**

(i) a wash place under cover having constant supply of water and provided with clean towels, soap and nail brushes and with at least one standpipe for every five such workers; (ii) 50 per cent of the standpipe provided under clause (i) shall be located in bathrooms where hot and cold water shall be made available during the working hours of the factory and for one hour thereafter; (iii) the washing and bathing facilities shall be in close proximity of the area housing the said processes; (iv) clean towels shall be provided individually to each worker: and (v) in addition to the taps mentioned under clause (i) one standpipe, in which warm water is made available, shall be provided on each floor. (b) Arrangement shall be made to wash factory uniforms and other work clothes everyday.

**14. Time allowed for washing. - Before the end of each shift 30 minutes shall be allowed for bathing for each worker who is employed in the said processes. Further, at least 10 minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.**

**15. Cloak-room. - There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes (a) a cloak-room with lockers having two compartments - one for street clothes and the other for work clothes, and (b) a place separate from the locker room and the mess-room, for the storage of protective equipment provided under paragraph 12. The accommodation so provided shall be under the care of a responsible person and shall be kept clean.**

**16. Mess-room. - There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during the meal intervals, a mess-room which shall be furnished with tables and benches and provided with suitable means for warming food.**

**17. Food, drinks, etc., prohibited in work-room. - No worker shall consume food, drink, pan, supari or tobacco or shall smoke in any work-room in which the said processes are carried on and no worker shall remain in any such room during intervals for meals or rest.**

**18. [ Medical facilities and records of examination and tests. - (a) The occupier of every factory to which this Schedule applies shall -**

(i)employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and(ii)provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (i).(b)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**19. Medical examination by the Certifying Surgeon. - (a) Every worker employed in the said processes shall be produced for examination by the Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for detection of methaemoglobin in blood (Haematological tests), paranitrophenol in urine, pulmonary function tests and CNS tests. No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b)Every worker employed in the said process shall be produced for re-examination by a Certifying Surgeon at least once in every six calendar months and such examination shall, wherever the Certifying Surgeon considers appropriate, include the tests specified in sub paragraph (a).(c)The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate which shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (a) and (b), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(d)The certificates of fitness and the health register shall be kept readily available for inspection by the Inspector, at all times during working of the factory.(e)If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit to work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(f)No worker who has been found unfit to work as mentioned in



sub-paragraph (e), shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes";]

**20. Obligations of the workers. - It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including exfoliative cytology of urine by the Certifying Surgeon or the qualified medical practitioner as provided for under these rules.**

**21. Instructions regarding risk. - Every worker on his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed on the measures to be taken to deal with an emergency.**

**22. Cautionary placards. - Cautionary placards in the form specified in appendix attached to this schedule and printed in the language of the majority of workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be easily conveniently read. Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.**

**23. Exemptions - Prohibited substances. - (a) The Chief Inspector may by a certificate in writing (which he may at his discretion revoke at any time), subject to such conditions, if any, as may be specified therein, exempt any process in the course of which any of the prohibited substances is formed, processed, manufactured, handled, or used from the provisions of paragraph 5 if he is satisfied that the process is carried out in a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater than that required for the purpose of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.**

(b) The Chief Inspector may allow the manufacture, handling or use of benzidine hydrochloride provided that all the processes in connection with it are carried out in a totally enclosed system in such a manner that no prohibited substance other than benzidine hydrochloride is removed therefrom except in quantities no greater than that required for the purpose of control of the processes or such purposes as necessary to ensure that the product is free from prohibited

substances and that adequate steps are taken to ensure that benzidine hydrochloride is, except while not in a totally enclosed system, kept wet with not less than one part of water two parts of benzidine hydrochloride at all times.

**24. Exemptions-General.** - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of the schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time), exempt such a factory from all or any of such provisions subject to such conditions. If any, as he may specify therein.

Appendix Cautionary Placard/notice Carcinogenic dye intermediate

- 1. Dye intermediates which are nitro amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.**
- 2. Use the various items of protective wear to safeguard your own health.**
- 3. Maintain scrupulous cleanliness at all times. Thoroughly wash hands and feet before taking meals. It is essential to take a bath before leaving the factory.**
- 4. Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, remove the contaminated clothing immediately. These chemicals are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.**
- 5. Handle the dye intermediates only with long handle scoops, never with bare hands.**
- 6. Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.**
- 7. Keep your food and drinks away from work place. Consuming food, drinks or tobacco in any form at the place of work is prohibited.**

**8. Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, cloths, machinery and equipment.**

## **XXV**

Handling and processing of asbestos, manufacture of any article of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form.

**1. Application. - This schedule shall apply to all factories or parts of factories in which any of the following processes is carried on :-**

(a)breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;(b)all processes in the manufacture of asbestos textiles including preparatory and finishing processes;(c)making of insulation slabs or section, composed wholly or partly of asbestos, and processes incidental thereto;(d)making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;(e)manufacture of asbestos cardboard and paper;(f)manufacture of asbestos cement goods;(g)application of asbestos by spray method;(h)sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or party of asbestos;(i)cleaning of any room, vessel, chamber, fixture or appliance for the collection of asbestos dust; and(j)any other processes in which asbestos dust is given off into the work environment.

**2. Definition. - For the purpose of this schedule -**

(a)"asbestos" means any fibrous silicate mineral and any admixture containing actionlite, amosite, anthophyllite, dhrysotile, crocidolite, tremolite or any mixture thereof, whether crude, crushed or opened;(b)"asbestos textiles" means yarn or cloth composed of asbestos or asbestos mixed with any other materials;(c)"approved" means approved for the time being in writing by the Chief Inspector.(d)"breathing apparatus" means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;(e)"efficient exhaust draught" means localised ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates;(f)"preparing" means crushing, disintegrating, and any other processes in or incidental to the opening of asbestos;(g)"protective clothing" means overalls and head covering which (in either case) will, when worn, exclude asbestos dust.

**3. Tools and Equipment. - Any tools or equipment used in processes to which this schedule applies, shall be such that they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.**

**4. Exhaust draught. - (1) An efficient exhaust draught shall be provided and maintained to control dust from the following processes and machines :-**

(a) manufacture and conveying machinery, namely - (i) preparing, grinding or dry mixing machines. (ii) carding, card waste and ring spinning machines, and looms. (iii) machines or other plant fed with asbestos, and (iv) machines used for the sawing, grinding, turning, drilling, abrading or polishing, in the dry state, of articles composed wholly or partly of asbestos. (b) cleaning and grinding of the cylinders or other parts of a carding machine; (c) chambers, hoppers or other structures into which loose asbestos is delivered or passed; (d) work-benches for asbestos waste sorting or for other manipulation of asbestos by hand; (e) work places at which the filling or emptying of sacks, skips, or other portable containers, weighting or other process incidental thereto which is effected by hand, is carried on; (f) sack cleaning machines; (g) mixing and blending of asbestos by hand; and (h) any other process in which dust is given off into the work environment. (2) Exhaust ventilation equipment provided in accordance with sub-paragraph (1) shall, while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in connection with which it is provided is being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place. (3) Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any work-room. (4) The asbestos being dust removed from any work-room by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.

**5. Testing and examination ventilating system. - (1) All ventilating system used for the purpose of extracting or suppressing dust as required by this schedule shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or tests shall be rectified forthwith.**

(2) A register containing particulars of such examination and tests and the state of the plant and the repairs or alteration (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

**6. Segregation in case of certain process. - Mixing or blending by the hand, of asbestos, or making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any other work is done.**

**7. Storage and distribution of loose asbestos. - (1) All loose asbestos shall, while not in use, be kept in suitable closed receptacles which prevent the escape of asbestos dust therefrom and such asbestos shall not be**

**distributed within a factory except in such receptacles or in a totally enclosed system of conveyance.**

**8. Asbestos sacks. - (1) All sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable material and shall be kept in good repair,**

(2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 3.

**9. Maintenance of floors and work places. - (1) In every room in which any of the requirements of this schedule apply-**

(a) the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for uses; and (b) the floors shall be kept free from any materials, plant or other articles not immediately required for the work carried on in the room, which would obstruct the proper cleaning of the floor. (2) The cleaning as mentioned in sub-paragraph (1) shall, so far as is practicable, be carried out by means of vacuum cleaning equipment so designed and constructed and so used that asbestos dust neither escapes nor is discharged into the air of any work place. (3) When the cleaning is done by any method other than mentioned in sub-paragraph (2), the persons doing cleaning work and any other person employed in that room shall be provided with respiratory protective equipment and protective clothing. (4) The vacuum cleaning equipment used in accordance with provisions of sub-paragraph (2), shall be properly maintained and after each cleaning operation its surfaces kept in a clean state and free from asbestos waste and dust. (5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occurring during the course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

**10. Breathing Apparatus and Protective Clothing. - (1) An approved breathing apparatus and protective clothing shall be provided and maintained in good condition for use of every person employed-**

(a) in chambers containing loose asbestos; (b) in cleaning, dust settling or filtering chambers of apparatus; (c) in cleaning the cylinders, including the offer cylinders, or other parts of a carding machine by means of hand-strickles; (d) in filling, beating, or leveling in the manufacture or repair of insulating mattresses; and (e) in any other operation or circumstance in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit. (2) Suitable accommodation in conveniently accessible position shall be provided for the use of persons when putting on or taking off breathing apparatus and protective clothing provided in

accordance with this paragraph and for the storage of such apparatus and clothing when not in use.(3)All breathing apparatus and protective clothing when not in use shall be stored in the accommodation provided in accordance with sub-paragraph (2) above.(4)All protective clothing in use shall be de-dusted under an efficient exhaust draught or by vacuum cleaning and shall be washed at suitable intervals. The cleaning schedule and procedure should be such as to ensure the efficiency in protecting the wearer.(5)All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once in every month by a responsible person.(6)A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector.(7)No person shall be employed to perform any work specified in sub-paragraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.(8)No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.

**11. Separate accommodation for personal clothing. - A separate accommodation shall be provided in a conveniently accessible position for all persons employed in operation to which this schedule applies for storing of personal clothing. This should be separated from the accommodation provided under sub-paragraph (2) of paragraph 10 to prevent contamination of personal clothing.**

**12. Wash and bathing facilities. - (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the schedule, Adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 15 persons employed.**

(2)The washing places shall have standpipes placed at intervals of not less than one metre.(3)Not less than one-half of the total number of washing places shall be provided with bathrooms.(4)Sufficient supply of clean towels made of suitable materials shall be provided :Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.(5)Sufficient supply of soap and nail brushes shall be provided.

**13. Mess-room. - (1) There shall be provided and maintained for the use of all workers employed in the factory covered by this schedule, remaining on the premises during the rest intervals, a suitable mess-room which shall be furnished with-**

(a)sufficient tables and benches with back rest, and(b)adequate means for warming food.(2)The mess-room shall be placed under the charge of a responsible person and shall be kept clean.

**14. Prohibition of employment of young persons. - No young person shall be employed in any of the processes covered by this schedule.**

**15. Prohibition relating to smoking. - No person shall smoke in any area where processes covered by this schedule are carried on. A notice in the language understood by majority of the workers shall be posted in the plant prohibiting smoking at such area.**

**16. Cautionary Notices. - (1) Cautionary notices shall be displayed at the approaches and along the perimeter of every asbestos processing area to warn all persons regarding -**

(a)hazards to health from asbestos dust,(b)need to use appropriate protective equipment,(c)prohibition of entry of unauthorized persons, or authorised persons but without protective equipment.(2)Such notices shall be in the language understood by the majority of the workers.

**17. Air Monitoring. - To ensure the effectiveness of the control measures, monitoring of asbestos fibre in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purpose.**

**18. Medical facilities and records of medical examinations and tests. - (1) The occupier of every factory or part of the factory to which the schedule applies, shall -**

(a)employ a qualified medical practitioner for medical surveillance of the workers covered by this schedule whose employment shall be subject to the approval of the Chief Inspector of Factories;(b)provide of the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).(2)The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspectors. [at all times during working of the factory] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.]

**19. Medical examination by Certifying Surgeon. - (1) Every worker employed in the processes specified in paragraph 1 [shall be produced for examination] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] by a Certifying Surgeon within 15 days of his first employment. Such examination shall include pulmonary function test, tests or detecting asbestos fibres in sputum and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(2) Every worker employed in the process referred to in sub-paragraph (1) [shall be produced for re-examination] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] by a Certifying Surgeon at least once in every twelve calendar months. Such examinations shall, whatever the Certifying Surgeon considers appropriate, including all the tests specified in sub-paragraph (1) except chest X-ray which will be carried out once in 3 years. (3) The Certifying surgeon after examining a worker, shall issue a Certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17. (4) The Certificate of Fitness and the health register shall be readily available for inspection by the Inspector [at all times during working of the factory] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.] (5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health register. The entry of his findings in those documents [shall also include] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] the period for which he considers that [the said worker] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] is unfit to work in the said processes. (6) No [worker] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] who has been found unfit to work as said in sub-paragraph (5) shall be [allowed or required] [Substituted by the West Bengal Factories (Amendment) Rules, 1991] to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes. [The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated] [Added by *ibid.*]

**20. Exemptions. - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by [an order] [Substituted by the West Bengal Factories (Amendment) Rules, 1991.] in writing, which may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such**



**conditions, if any, as he may specify therein.**

[Schedule XXVI [Added by the West Bengal Factories (Amendment) Rules, 1991] Manipulation of stone or any other material containing free Silica

**1. Application - This Schedule shall apply to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on.**

**2. Definition - For the purpose of this Schedule -**

(a)"manipulation" means crushing, breaking, chipping, dressing grinding, sieving, mixing, granding or handling of stone or any other material containing free silica or any other operation involving such some materials;(b)"stone or any other material containing free silica" means a stone or any other solid material containing not less than 5% by weight of free silica.

**3. Precautions in manipulation - No. manipulation shall be carried out in a factory or part of a factory unless one or more of the following measures, namely-**

(a)damping the stone or other material being processes;(b)providing water supply;(c)enclosing the process;(d)isolating the process; and(e)providing localised exhaust ventilation; are adopt so as to effectively control the dust in working environment in any place in the factory where any worker is employed, at a level equal to or below the maximum permissible level for silica dust as laid down in the Second Schedule appended to Section 41 F of the Act: Provided that such measures as above mentioned may not be necessary when the process or operation itself is such that the level of dust created and prevailing does not exceed the permissible level referred to.

**4. Maintenance of floors. - (a) All floors of places where fine dust is likely to settle on and whereon any person has to work or pass shall be of impervious material and maintained in such condition that they can thoroughly cleaned by a moist method or any other method which would prevent such dust being airborne in the process of cleaning.**

(b)The surface of every floor of every work-room or place where any work is carried on or where any person has to pass during the course of his work, shall be cleaned of dust at least once during each shift either by a moist method or by any other suitable method so as to prevent dust being airborne in the process of cleaning.

**5. Prohibition relating young persons: - No young person shall be employed or permitted to work in any of the operational works involving manipulation or at any place where such operations are carried on.**

**6. Medical facilities and records of examinations and tests: - (a) The occupier of every factory to which this Schedule applies, shall**

(i) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector: and (ii) provide to the said medical practitioner all the necessary facilities for the purpose referred to clause (i). (b) The record of medical examination and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**7. Medical examination by Certifying Surgeon: - (a) Every worker employed in the processes specified in paragraph I shall be produced for examination by a Certifying Surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed or required to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(b) Every worker employed in the said processes shall be produced for re-examination by a Certifying Surgeon at least once in every twelve months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (a) except chest X-ray which shall be once in 3 years. (c) Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the certificate and the certificates shall be kept in the custody of the Manager of the factory. The record of each examination carried on under sub-paragraphs (a) and (b), including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17. (d) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory. (e) If, at any time, the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said workers is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated. (f) No worker who has been found unfit to work as mentioned in sub-paragraph (e), shall be allowed or required to work in the said processes unless the Certifying Surgeon, after further examination, again certified him fit for employment in those processes;

**8. Exemption: - If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the process or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector may, by an order in writing, which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, it any, as he may specify therein.**

## **XXVII**

Manufacture, handling or manipulation of corrosive substances.

### **1. Definitions - For the purposes of this Schedule,-**

(a)"corrosive operation" means an operation of manufacturing, storing, handling, processing, packing, or using any corrosive substance in a factory: and(b)"corrosive substance" includes sulphuric acid, nitric acid, hydrochloric acid, hydrofluoric acid carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, ammonia, sodium hydroxide and potassium hydroxide and a mixture thereof and any other substance which the State Government may, by notification in the Official Gazette, specify to be a corrosive substance.

**2. Flooring - The floor of every workroom of a factory in which corrosive operation is carried on shall be made of impervious, corrosion and fire resistant material and shall be so constructed as to prevent collection of any corrosive substance at any place. The surface of such flooring shall be smooth and cleaned as often as necessary and maintained in a sound condition.**

**3. Protective equipment - (a) The occupier shall provide for the use of all persons. employed in any corrosive operation, suitable protective wear for hands and feet, suitable aprons. face shields, chemical safety goggles, and respirators. The equipments shall be maintained in good order and shall be kept in clean and hygienic condition by suitably treating to get rid of the ill effects of any absorbed chemicals and by disinfecting. The occupier shall also provide suitable protective creams and other preparations wherever necessary.**

(b)The protective equipment and preparations provided shall be used by the persons employed in any corrosive operation.

**4. Water facilities. - Where any corrosive operation is carried on, there shall be provided as close to the place of such operation as possible, a source of clean water at a height of 210 centimeters from a pipe of 125 centimeters diameters and fitted with a quick active valve so that in case of any part of the body of a worker coming in contact with any corrosive sub-stance, the part can be thoroughly flooded with water. Whenever necessary, in order to ensure continuous supply, a storage tank having a minimum length, breadth and height of 210 centimeters, 120 centimeters and 60 centimeters, respectively or of such dimensions as are approved by the Chief Inspector, shall be provided as the source of clean water.**

**5. Cautionary notice - Cautionary notice in the following form and printed in the language understood by majority of the workers employed. shall be displayed prominently close to the place where a corrosive operation is carried out and where it can be easily and conveniently read by the workers. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.**

Caution Notice  
Danger  
Corrosive substances cause severe burns and vapour there of may be extremely hazardous. In case of contact, immediately flood the part affected with plenty of water for at least 15 minutes. Get medical attention quickly.

**6. Transport. - (a) Corrosive substances shall not be filled, moved, or carried except in containers or through pipes and when they are to be transported in containers they shall be placed in crates of sound construction and of sufficient strength.**

(b) For a container with a capacity of 11-5 litres or more of a corrosive substance provision shall be made to place it in a receptacle or crate and then carried by more than one person at a height below the waist line unless a suitable rubber wheeled truck is provided for the purpose. (c) Containers for corrosive substances shall be plainly labelled.

**7. Devices for handling corrosives - (a) Suitable tilting, lifting or pumping arrangements shall be provided for emptying jars, carboys and other containers of corrosives.**

(b) Corrosive substance shall not be permitted to be handled by bare hands but by means of a suitable scoop or other device.

**8. Opening of valves. - Valves fitted to containers holding a corrosive substance shall be opened with great care. If they do not work freely, they shall not be forced open. They shall be opened by a worker suitably trained for the purpose.**

**9. Cleaning tanks, stills etc. - (a) In cleaning out of removing residues from stills or other large chambers used for holding any corrosive substance, suitable implements made of wood or other material shall be provided for use to prevent production of arseniuretted hydrogen (arsine).**

(b) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter a chamber, tank, vat, pit or other confined space where a corrosive substance had been stored, all possible precautions required under section 36 of the Act shall be taken to ensure the worker's safety. (c) Wherever possible, before repairs are undertaken to any part of equipment in which a corrosive substance was handled, provision shall be made to make such equipment or part thereof free of any adhering corrosive substance by adopting suitable methods.

**10. Storage. - (a) Corrosive substances shall not be permitted to be stored in the same room with other chemicals, such as turpentine, carbides, metallic powders and combustible materials, to prevent accidental mixing with so as to cause a reaction resulting formation of toxic fumes and gas and affecting the workers therein or nearby.**

(b) Pumping or filling overhead tanks, receptacles, vats or other containers for storing corrosive substances shall be so arranged as to prevent possibility of any corrosive substance overflowing and causing injury to any person. (c) Every container having a capacity of twenty litres or more and every pipeline, valve and fitting used for storing of corrosive substances shall be thoroughly examined every year for finding out any defectant, defects so found out, shall be removed forthwith. A register shall be maintained of every such examination made and shall be produced before the Inspector at all times during working of the factory.

**11. Fire extinguishers and fire fighting equipment. - An adequate number of suitable type of fire extinguishers of other fire fighting equipment, depending on the nature of chemicals stored, shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instruction as to how the extinguishers or other equipment are to be used, printed in the language understood by majority of the workers employed, shall be affixed near each extinguisher or other equipment.**

**12. Exemption.** - If, in respect of any factory, on an application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances, or the infrequency of the process or for any other reasons, to be recorded by him in writing, all or any of the provisions of this schedule are not necessary for the protection of the persons employed therein, he may by an order in writing, which he may at any time revoke, exempt the factory from such of the provisions and subject to such conditions as he may specify therein.

## **XXVIII**

Manufacturing process or operations in carbon disulphide plants.

**1. Application.** - This Schedule shall apply to all electric furnances in which carbon disulphide is generated and all other plants where carbon disulphide after generation, is condensed, refined and stored in a factory or part of a factory. This Schedule shall be in addition to and not in derogation of any of the provisions of the Act and the rules made thereunder.

**2. Construction. installation and operation.** - (a) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such as to expose a minimum number of workers to the risk of any fire or explosion at any one time.

(b) Every electric furnace and every plant in which carbon disulphide is condensed, refined and stored with all their fittings and attachments shall be of good condition, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected and shall be so designed that carbon disulphide, liquid and gas are contained in closed system during their normal working. (c) Supports of an electric furnace generating carbon disulphide shall be firmly grouted about 60 centimeters in concrete or by other effective means. (d) Every electric furnace shall be installed and operated according to manufacturers' instructions and such instructions shall be clearly imparted to the personnel in charge of construction and operation. (e) The instructions regarding observance of correct furnace temperature sulphur dose, admissible current or power consumption and periodical checking of charcoal level shall be strictly complied with.

**3. Electrodes. - (a) Where upper rind electrodes made of steel are used in the electric furnace, they shall be of seamless tube construction and shall have arrangement for being connected to cooling water system through a siphon built in the electrodes or through a positive pressure water-pump.**

(b)The arrangement for cooling water referred to in sub-paragraph (a), shall be connected with automatic alarm system so as to actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation as also further supply of water. The alarm system and the actuating device shall be checked every day.

**4. Maintenance of charcoal level. - When any electric furnace is in operation, it shall be ensured that the electrodes are always kept covered with charcoal bed.**

**5. Charcoal separator - A charcoal-separator of cyclone type shall be fitted on the off-take pipe between the electric furnace and sulphur separator to prevent entry of pieces of charcoal into the condensers and piping.**

**6. Rupture discs and safety seal. - (a) At least two rupture discs of adequate size as to be blown off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.**

(b)A safety water seal shall be provided and tapped from a point between the charcoal separator and the sulphur separator.

**7. Pyrometer and manometers. - (a) Each electric furnace shall be fitted with adequate number of pyrometers to give an indication of the temperature as correctly as reasonably practicable at various points in the furnace. The dials for reading the temperatures shall be located in the control room.**

(b)Manometers or any other suitable devices shall be provided for indicating pressure-(i)in the off-take pipe before and after the sulphur separator, and(ii)in primary and secondary condensers.

**8. Check Valves - All pipings carrying carbon disulphide shall be fitted with check valves at suitable positions so as to prevent gas from flowing back into any electric furnace in the event of its shut down.**

**9. Inspection and maintenance of electric furnaces. - (a) Every electric furnace shall be inspected internally by a competent person before being placed in service after-**

(i) installation; (ii) reconstruction or repairs, and (iii) every time the furnace is opened for cleaning or de-ashing or for replacing electrodes. (b) When an electric furnace is shut down for cleaning or de-ashing, (i) the brick lining shall be checked for continuity and any part found defective removed; (ii) after removal of any part of the lining referred to in clause (i), the condition of the shell shall be closely inspected; and (iii) any of the plates of the shell found corroded to the extent that safety of the furnace is endangered shall be replaced.

**10. Maintenance of records. - (a) The following hourly records shall be maintained in a log book:-**

(i) Manometer readings at the points specified in clause (b) sub-paragraph 7. (ii) Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers. (iii) Water temperature and flow of water through the siphon in the electrodes. (iv) Primary and secondary voltages and current and energy consumed. (b) The log book shall be checked and signed by a responsible officer and always be readily available to the inspector at all times during working of the factory.

**11. Electrical apparatus, wiring and fittings - All buildings in which carbon disulphide is refined or stored shall be provided with electrical apparatus, wiring and fittings so as to afford adequate protection from fire and explosion.**

**12. Prohibition relating to Smoking - No person shall be permitted to smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored, and a notice in the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means producing naked light or spark into such rooms.**

**13. Means of escape - Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent staircases of adequate width shall be provided in every building, housing the furnaces at reasonable intervals at opposite ends, The means of escape shall always be kept clear of all obstructions and so designed as to afford easy escape.**



**14. Warnings in case of fire - There shall be adequate arrangements for giving warnings in case of fire or explosion, and the same shall operate on electricity and case of failure of electricity, by some effective mechanical means.**

**15. Fire-fighting equipments - (a) Adequate number of suitable fire extinguishers or other fire-fighting equipments shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored.**

(b) Clear instruction as to how the extinguishers or other equipments are to be used, printed in the language understood by a majority of the workers employed, shall be affixed to each extinguishers or other equipment and the personnel, trained in their use.

**16. Bulk sulphur - (a) Open or semi-enclosed spaces for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotives etc., and precautions shall be taken to ensure that flames, smoking and matches and other sources of ignition may not come in contact with the clouds of dust arising during handling of bulk sulphur.**

(b) All enclosures for bulk sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge. (c) The bulk storage of sulphur in the enclosures shall be handled in such a manner as to minimise the formation of dust clouds and flame, smoking and matches or other sources of ignition shall be avoided during handling, and non-sparking tools shall be used whenever sulphur is shoveled or otherwise removed by hand. (d) No repairs involving flames, heat or use of hand or power tools shall be permitted in the enclosure where bulk sulphur is stored.

**17. Liquid sulphur. - Open flames, electric sparks and other sources of ignition, including smoking and matches, shall be excluded from and prohibited in the vicinity of molten sulphur.**

**18. Training and supervision - (a) All electric furnaces and all plants in which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.**

(b) Every worker employed for operation and maintenance of electric furnaces and the plants shall be properly qualified and adequately trained before permitting to undertake such work.

**19. Prohibition of employment of women and young persons. - No women or young persons shall be employed or permitted to work in any of the plants to which this Schedule applies.**

**20. Washing facilities. - The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed, wash-places under cover at the scale of one tap or stand-pipe, having a constant supply of clean water for every five such persons. The taps or stand-pipes shall be spaced not less than 120 centimeters apart and provided with a sufficient supply of soap, nail brushes and clean towels, provided that the towels shall be supplied individually to each worker.**

**21. Personal protective equipment. - (a) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and foot-wear shall be provided for the use of operatives.**

(i)when operating valves or cocks controlling fluids etc.(ii)Drawing of a molten sulphur from sulphur pits; and(iii)handling charcoal or sulphur.(b)Suitable respiratory protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.(c)Arrangements shall be provided for proper and efficient cleaning of all such protective equipment.

**22. Clock rooms. - There shall be provided and maintained for the use of all persons employed in the processes, a suitable cloak room for clothing put off during work hours and a suitable place separate from the cloak-room for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.**

**23. Unauthorised persons. - Only maintenance and repair personnel, persons directly connected with the plant operation and those accompanied by authorized persons shall be admitted into the plant.**

## **XXIX**

Operations involving High Noise Level

**1. Application. - This Schedule shall apply to all operations in any manufacturing process having high noise level.**

## 2. Definitions. - For the purpose of this Schedule-

(i)"noise" means any unwanted sound(ii)"high noise level- means any noise level when measured on the A-weighted scale reads 90 dB or above;(iii)"decibel' means one-tenth of "Bel" which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of "Bels" denoting such a ratio being the logarithm to the base of 10 of this ratio. The noise level (or the sound pressure level) corresponds to a reference pressure of  $20 \times 10$  newtons per square meter or 0.0002 dynes per square centimeter which is the threshold of hearing, that is, the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated form is dB.;(iv)"frequency" is the rate of pressure variations expressed in cycles per second or hertz;(v)"dBA" refers to sound level in decibels as measured on a sound level meter operating on the A-weighting net work with slow meter response; and(vi)"A-weighting" means making grade adjustments in the intensities of sound of various frequencies for the purpose of noise measurement, so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.

**3. Protection against noise - (a) In every factory, suitable engineering control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2, annexed hereto.**

Table-1 Permissible exposure in cases of continuous noise.

Total time of exposure (continuous or number of Short term exposures) per day, in hours.	Sound pressure level in DBA
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
¾	107
½	110
¼	115

Note : (1) No exposure in excess of 115 dBA is permitted.(2)For any period of exposure falling in between any figure and the next higher of lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extrapolation on a proportionate basis.

Table-3 Permissible exposure levels of impulsive or impact noise.

Peak sound pressure level in dB	Permitted number of impulses of impact Per day.
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140	100
135	315
130	1000
125	3160
120	10000

Note: (1) No exposure in excess of 140' dB peak sound pressure level is permitted. (2) For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis. (b) For the purposes, of this Schedule, if the variations in the noise level involve maximum at intervals of one second or less, the noise shall be considered as a continuous one and the criteria given in Table 1 shall apply. In other cases, the noise shall be considered as impulsive or impact noise and the criteria given in Table 2 shall apply. (c) When the daily noise exposure is composed of two or more periods of noise exposure at different levels their combined effect shall be considered, rather than the individual effect of each. The mix exposure shall be considered to exceed the limit value if the sum of the fractions  $\frac{C_1}{T_1} + \frac{C_2}{T_2} + \dots + \frac{C_n}{T_n}$  exceeds Unity, where the  $C_1, C_2$ , etc. indicate the total time of actual exposure at a specified noise level and  $T_1, T_2$  etc. denote the time of exposure permissible at that level., Noise exposure of less than 90 dBA may be ignored in the above calculation. (d) Where it may not be possible to reduce the noise exposure to the levels specified in clause (a) by reasonably practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such other control measures, and each worker so exposed shall be provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in clause (a). (e) Where the ear protectors provided in accordance with clause (d) and worn by a workers cannot still attenuate the noise reaching near his ear, as determined by subtracting the attenuating value in dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible as specified in Table 1 or Table 2, as the case may be. the noise exposure period shall be suitably reduced to correspond to the permissible noise exposures specified in clause (a). (f) (i) In all cases where the prevailing sound levels exceed the permissible levels specified in clause (a), there shall be administered an effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to places where noise levels are relatively less or by any other suitable means. (ii) Every worker employed in areas, where the noise exceeds the maximum permissible exposure levels specified in clause (a), shall be subjected to an auditory examination by a Certifying Surgeon within 15 days of his first employment and thereafter, shall be re-examined at least once in every 12 months. Such initial and periodical examinations shall include tests which the Certifying Surgeon may consider appropriate and shall include determination of auditory thresholds for pure tones of 125, 250, 500, 1000, 2000, 4000 and 8000 cycles per second.

## XXX

Manufacture, handling, manipulation, storage of and operations using highly flammable liquids and flammable compressed gases

**1. Application - This Schedule shall be applicable to all factories or part of factories where highly flammable liquid or flammable compressed gas is manufactured, stored, handled or used.**

**2. Definition - For the purpose of this Schedule-**

(i)"highly flammable liquids" means any liquid including its solution emulsion or suspension which when tested in a manner specified by sections 14 and 15 of the Petroleum Act, 1934 (30 of 1934), gives off flammable vapours at a temperature less than 32 degrees centigrade; and(ii)"flammable compressed gas" means flammable compressed gas as defined in Section 2 of the Static and Mobile Pressure Vessels (Unfired) Rules, 1981 framed under the Explosives Act, 1884.

**3. Storage - (a) Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank, or in suitable closed vessel located in a safe position under the ground, in the open or in a store room of adequate fire resistant construction.**

(b)Except as necessary for use, operation or maintenance, every vessel or tank which contains or had contained a highly flammable liquid or flammable compressed gas shall be always kept closed and all reasonable practicable steps shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.(c)Every container, vessel, tank, cylinder, or store room used for storing highly flammable liquid or flammable compressed gas shall be clearly and in bold letter marked "Danger-Highly Flammable Liquid" or "Danger-Flammable Compressed Gas" in one or more languages understood by a majority of persons employed.

**4. Enclosed systems for conveying highly flammable liquids - (a) Wherever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed systems consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed system shall be so designed, installed, operated and maintained as to avoid leakage or the risk of spilling.**

(b)Wherever there is a possibility for leakage or spill of highly flammable liquid or flammable compressed gas from an equipment, pipeline, joint or other part of a system, all practicable measures shall be taken to contain, drain off or dilute such spills or leakage as to prevent formation of flammable or explosive mixture with air.

**5. Prevention of ignition. - (a) In every room, work place or other location where highly flammable liquid or flammable compressed gas is stored, conveyed, handled or used or where there is danger of fire or explosion from accumulation of such highly flammable liquid or flammable compressed gas in air, all practicable measures shall be taken to exclude the source of ignition. Such precautions shall include the following :-**

(i)all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;(ii)effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;(iii)no person shall wear or be allowed to wear any foot wear having iron or steel nails or any other exposed ferrous materials which may cause sparks by friction;(iv)smoking. lighting or carrying of matches, fire or lighters or other means of producing a naked light or spark shall be prohibited;(v)transmission belts with iron fasteners shall not be used; and(vi)all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, or overheated surfaces of machinery or plants, chemical or physical-chemical reaction and radiant heat.

**6. Fire fighting.- In every factory where highly flammable liquid or flammable compressed gas is manufactured, stored, handled or used, appropriate and adequate means of fighting a fire at such sources shall be provided. The adequacy and suitability of such means, which expression include the fixed and portable fire extinguishing systems, extinguishing materials, procedures and the process of fire fighting, shall be to the standards and levels prescribed by the Indian Standards applicable, and any case not inferior to the stipulations under rule 62.**

**7. Exemption.- If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory. the Chief Inspector may be an order, in writing which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.**

**XXXI**

Operation in foundaries

## **1. Application. - Provisions of this Schedule shall apply to all parts of factories where any of the following operations or processes are carried on :-**

(a)The production of iron castings or steel castings by castings in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding, or by centrifugal casting and any process incidental to such production.(b)The production of non-ferrous castings by casting metal in moulds made of sand, loam, metal, moulding composition or other material or mixture of materials, or by shell mouldings, die-casting (including pressure die-casting), centrifugal casting or continuous casting and any process incidental to such production.(c)The melting and casting of non-ferrous metal for the production of ingots, billets, slabs or other similar products, and the stripping thereof, but shall not apply with respect to-(i)any process in respect of the smelting and manufacture of lead and Electric Accumulators; or(ii)any process for the purposes of printing works; or(iii)any smelting process in which metal is obtained by a reducing operation or any process incidental to such operation; or(iv)the production of steel in the form of ingots; or(v)any process in the course of the manufacture of solder or any process incidental to such manufacture; or(vi)the melting and casting of lead or any lead-based alloy for the production of ingots, billets, slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

## **2. Definition - For the purpose of this schedule,-**

(a)"approved respirator" means a respirator of a type approved by the Chief Inspector;(b)"cupola or furnace" includes receiver a associated therewith;(c)"dressing or fettling operations" include stripping and other removal of adherent sand, cores, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include -(i)the removal of metal from a casting when performed incidentally in connection with the machining or assembling of castings after they have been dressed or fettled; or.(ii)any operation which is a knock-out operations within the meaning of this Schedule;(d)"foundry" means those parts of a factory in which the production of iron or steel or non-ferrous castings (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding or by centrifugal casting in metal moulds lined with sand, or die casting including pressure die castings, together with any part of the factory in which any of the following process are carried on as incidental process in connection with and in the course of, used in foundry process, the preparation and mixing of materials used in foundry process, the preparation of moulds and cores, knock out operations and dressing of fettling operations;(e)"knock-out operations" mean all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring-out and the removal of runners and risers;(f)"pouring aisle" means an aisle leading from main gangway or directly from a cupola or furnance to where metal is poured into moulds.

**3. Prohibition of use of certain materials as parting materials - (a) A material shall not be used as a parting material if it is a material containing compounds of silicon calculated as silica to the extent more than 5 percent by weight of the dry material ;**

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silicon;-(i)Zirconium silicate (Zircon);(ii)Calcined china clay;(iii)Calcined aluminous fireclay;(iv)Silimanite;(v)Calcined or fused alumina;(vi)Olivine;(vii)Natural sand.(b)Dust or other matter deposited from a fettling or blasting process shall not be used as a parting material err as a constituent in a parting material.

**4. Storage arrangement - For the purpose of promoting safety and cleanliness in workrooms the following requirements shall be observed-**

(a)Moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy articles shall be so arranged and placed as to enable work to be carried on without any risk of bodily injury.(b)Suitable and conveniently accessible racks, bins or other receptacles shall be provided, maintained and used for the storage or other gear and tools.(c)Where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins. bunkers or other receptacles shall be provided and maintained for the purpose of such storage.

**5. Construction of floors - (a) Floors of indoor workplaces in which the processes are carried on, other than parts which are of sand, shall have an even surface of hard materials.**

(b)No part of the floor of any such indoor workplace shall be of sand except where this is necessary by reason of the work to be done.(c)All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as reasonably practicable, be maintained in an even and firm condition.

**6. Cleanliness of indoor workplaces - (a) All accessible parts of the walls of every indoor workplace in which the processes are carried on and of everything affixed to those walls shall be effectively cleaned by a suitable method to a height of not less than 4.2 metres from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this paragraph including the date (which shall be not less than five months nor more than nine months after the last immediately preceding washing, cleaning or other treatment) shall be entered in a register maintained as nearly as possible in Form 6.**



(b) Effective cleaning by a suitable method shall be carried out at least once every working day of all accessible parts of the floor of every indoor workplace in which the processes are carried on, other than parts which are of sand and the parts which are of sand shall be kept in good order.

**7. Manual operations involving molten metal - (a) There shall be provided and properly maintained for all workers employed or permitted on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation-**

(i) which shall be adequate for the safe performance of the work; and (ii) which, so far as reasonably practicable, shall be kept free from obstruction. (b) Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which, where any worker walks while engaged in the operation, shall be on the same level; Provided that where necessary to enable the operation to be performed without undue risk, nothing in this paragraph shall prevent the occasional or exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor any worker while engaged in the operation.

**8. Gangways and pouring aisles - (1) In every workroom, to which this paragraph applies, constructed, reconstructed or converted for use as such after the making of this Schedule, and so far as reasonably practicable, in every other workroom to which this paragraph applies, sufficient and clearly defined main gangways shall be provided and properly maintained which -**

(i) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage; (ii) shall be kept, so far as reasonably practicable, free from obstruction; (iii) if not used for carrying molten metal, shall be at least 920 millimeters in width; and (iv) if used for carrying molten metal shall be (a) where truck ladles are used exclusively, at least 600 millimetres wider than the overall width of the ladle; (b) Where hand shanks are carried by not more than two men, at least 920 millimetres in width; (c) Where hand shanks are carried by more than two men, at least 1.2 metres in width; and (d) where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 metres in width. (2) In workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the coming in to force of this Schedule, sufficient and clearly defined pouring aisles shall be provided and properly maintained which - (i) shall have an even surface of hard material and shall, in particular, not be of sand or have on them more sand than in necessary to avoid risk of flying metal from accidental spillage; (ii) shall be kept, so far as reasonably practicable, free from obstruction; (iii) if molten metal is carried in hand ladles or bull-laures by not more than two men per ladle, shall be at least 460 millimetres wide, but where any moulds alongside the aisle are more than 510 Millimetres above the floor of the aisle, the aisle shall be not less than 600 millimetres wide; (iv) if molten metal is carried in hard ladles or bull laves by more than two men per ladle, shall be at least 760 millimetres wide and (v) if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the

work where compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided. Explanation - In this paragraph "workroom to which this paragraph applies" means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and workroom to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the coming into force of this schedule if the construction, reconstruction or conversion thereof has begun after the making of this Schedule. (3) Requirements of sub-paragraphs (1) and (2) shall not apply to any work-room of part of a workroom if, by reason of the nature of the work done therein, the floor of the work room or, as the case may be, that part of a workroom be of sand. (9) Work near cupolas and furnaces. - No person shall carry out any work within a distance of 4 metres from a vertical line passing through the delivery end of any metal spout of a cupola or of, a furnace used for delivering molten metal, or within a distance of 2.4 metres from a vertical line passing through the nearest part of any ladle which is in position at the end of such a spout. Provided that for proper use or maintenance of a cupola or a furnace work, which should necessarily be carried on, may be undertaken within that distance at such a time and under such condition that there exists no danger to the worker carrying on such work from molten metal. (10) Dust and fumes. - (1) Open coal, coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom. (2) No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fire is unavoidable. (3) Mould stoves, core stoves and annealing furnace shall be so designed, constructed, maintained and worked as to prevent, so far as reasonably practicable, offensive or injurious fumes from entering into any workroom during any period when a worker is engaged therein. (4) All knock-out operations shall be carried out - (a) in a separate part of the foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation and a high standard of general ventilation are provided; or (b) in an area of the foundry in which, so far as reasonably practicable, effective and suitable local exhaust ventilation is provided. (5) All dressing or fettling operations shall be carried out - (a) in a separate room or in a separate part of the foundry suitably partitioned off; or (b) in an area of the foundry set apart for the purpose; and shall, so far as reasonably practicable, be carried out with effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating, as near as possible, to point of origin of the dust.

## **11. Maintenance and examination of exhaust plant - (1) All ventilation plants used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.**

(2) All ventilating plants used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person at least once in every period of twelve months and particulars of the results of every such examination and test shall be entered in a register approved by the Chief Inspector and it shall be available for inspection by an Inspector at all times during working of the factory. Any defect found on any such examination and test shall be immediately reported in writing by the person carrying out the examination and test to the occupier or manager

of the factory and a copy thereof endorsed to the Inspector.

**12. Protective equipment: - (1) The occupier shall provide and maintain suitable protective equipment specified below for the protection of the workers :**

(a)suitable gloves or other protection for the hands of workers engaged in handling any hot material likely to cause injury to the hands by burn, scald or scar, or in handling pig iron, rough castings or other articles likely to cause injury to the hands by cut, abrasion or otherwise; and(b)approved respirators for workers carrying out any operations creating a heavy dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.(2)No respirator which has been provided for the purposes of clause (b) of sub-paragraph (1) and worn by a worker shall be worn by another worker it has not since been thoroughly cleaned and disinfected.(3)Workers who, for any portion of their time:-(a)work at a spout of or attend to, a cupola or furnace in such circumstances that material therefrom may come into contact with the body, being material at such a temperature that its contact with the body would cause a burn; or(b)are engaged in, or in assisting with, the pouring of molten metal; or(c)carry by hand or move by manual power any ladle or mould containing molten metal: or(d)are engaged in knocking out operations involving material at such a temperature that its contact with the body would cause a burn; shall be provided with suitable footwear and gaiters which shall be worn by them to prevent so far as reasonably practicable, risk or burn to his feet and ankle's.(4)Where appropriate, suitable screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).(5)The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.(6)Every worker shall make full and proper use of the equipment provided for his protection in pursuance of sub-paragraphs (1) and (2) and shall, without delay, report to the occupier, Manager or other appropriate person, of any defect in, or loss of. the same.

**13. Washing and bathing facilities. - (1) There shall be provided and maintained in clean state and good repair for the use of all workers employed in the factory-**

(a)a wash place under cover with either-(i)a trough with impervious surface fitted with a waste pipe without plug, of sufficient length to allow at least 60 centimetres for every 10 such workers employed at any one time and having a constant supply of clean water from taps or jets above the trough at intervals of not more than 60 centimetres: or(ii)at least one tap or stand pipe for every 10 of such workers employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.2 metres apart;(b)not less than one half of the total number of washing places provided under clause (a) shall be in the form of bathrooms; and(c)a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.(2)The facilities provided for the purposes of sub-paragraph (1) shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.

**14. Disposal of dross and skimmings. - Dross and skimmings removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.**

**15. Disposal of waste. - Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste burnt sand), as soon as reasonably practicable, after the castings have been knocked-out.**

**16. Materials and equipments left out of doors. - All materials and equipments left out of doors (including material and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid any risk of bodily injury. There shall be safe means of access to all such materials and equipments and, so far as reasonably practicable, such access shall be by roadways or pathways which shall be properly maintained. Such roadways or pathways shall have a firm and even surface and shall, so far as reasonably practicable, be kept free from obstruction.**

**17. Medical facilities and records of examinations and tests. - (1) The occupier of every factory to which the Schedule applies, shall-**

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector; and (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a). (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector at all times during working of the factory.

**18. Medical examination by Certifying Surgeon. - (1) Every worker employed in a foundry shall be produced for medical examination by a Certifying Surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.**

(2) Every worker employed in the said processes shall be produced for reexamination by a Certifying Surgeon at least once in every twelve months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which may be once in 3 years. (3) The Certifying Surgeon after examining a worker, shall issue a Certificate of fitness in Form 25. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the

factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 17.(4)The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector at all times during working of the factory.(5)If, at any time. the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein may involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said worker is unfit for work in the said processes. The worker so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably rehabilitated.(6)No worker who has been found unfit to work as said in sub-paragraph (5) shall be re-employed or permitted to work in the said process unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

**19. Exemption. - If in respect of any factory. the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this Schedule is not necessary for protection of the workers in the factory, the Chief Inspector may, by a certificate in writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions, subject to such conditions, if any, as he may specify therein.";**

Rules 95, 96 and 97 prescribed under section 88.

## **95. Notification of accidents - Fatal and serious.**

- When there occurs in any factory an accident to any person which results in (a) death, or (b) such injury that there is no reasonable prospect that he will be able to resume his employment in the factory within 20 days, such accidents shall be called in all prescribed communications "Fatal" or "Serious" as the case may be, and the Manager of the Factory shall give notice of the occurrence forthwith by telephone, telegram or special messenger to -(1)the Inspector of Factories,(2)the District Magistrate or, if the District Magistrate by order so directs, the Sub-divisional Officer.(3)the Commissioner for Workmen's Compensation appointed under section 20 of the Workmen's Compensation Act, 1923.(4)the relatives of the injured or deceased person, and(5)in the case of fatal accidents only, the officer-in-charge of the police-station within the local limits of which the factory is located.Reports by special messenger shall be as nearly as possible in Form No. 18 and those sent by telephone or telegram shall be confirmed within [12] hours by written report in that form.Provident [Substituted by West Bengal Factories (Amendment) Rules, 1991.], however, that the Defence Installations may send reports of accidents in their own form 1AFO 1973, subject to the condition that any change in the form shall at once be communicated to the Chief Inspector in writing.

## **96. Minor.**

- When there occurs in any factory an accident to any person less serious than those described in rule 95 but which prevents or is likely to prevent him from resuming the employment in the factory within 48 hours after the accident occurred, such accident shall be recorded by the manager of the factory and reported by him in Form No. 18 as soon as practicable, but in any case within 72 hours of its occurrence to the authorities mentioned in clauses (1), (2) and (3) of rule 95. Such accidents shall be called in prescribed communications "minor accidents".

## **97. Supplementary reports.**

(1) When an accident which has been reported to the Inspectors as either "Serious" or "Minor" afterwards proves to be "Fatal", the manager of the factory shall make the necessary correction in a supplementary report which shall be sent forthwith to the authorities mentioned in clauses (1), (2), (3) and (4) of rule 95. (2) When an accident which has been reported to the Inspector as "Minor" afterwards proves to be "Serious" the manager of a factory shall make the necessary correction in a supplementary report which shall be sent forthwith to the authorities mentioned in clauses (1), (2), (3) and (4) of rule 95. Rule prescribed under section 112.

## **98. Site of fatal accident.**

- Where loss of life has immediately resulted from an accident, the place where the accident occurred shall be left as it was immediately after the accident until the expiration of at least three days after the time when the notice required under rule 95 was given, until the visit to the place by an inspector, whichever first happens, unless compliance with rule would tend to increase or continue the danger. Rule prescribed under section 88A

## **99. Dangerous occurrence**

(1) The following occurrences in a factory, whether or not attended by personal injury or disablement, are declared as dangerous occurrences :- (a) bursting of a plant used for containing or supplying steam under pressure greater than atmospheric pressure; (b) explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas; (c) explosion, fire, bursting out, leakage or escape of any molten metal, or hot liquor, or gas; (d) collapse or serious accident of any plant, machinery, hoist, lift, lifting Machine, lifting tackle, and the over turning of a crane; and (e) collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney wall, building or any other structure. (2) When there happens in any factory any dangerous occurrence referred to in sub-rule (1), such occurrence shall be reported by the manager of the factory within five hours of its occurrence to the authorities mentioned in clauses (1) and (2) of rule 95. Such report shall be as nearly as possible in Form No. 19. Rule prescribed under sub-section (1) of section 89.

## 100. Notice of poisoning or disease

- A notice as nearly as possible in Form No. 20 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon, by the manager of a factory in which there occurs a case of lead, phosphorus, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning, or poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of the aliphatic series; or of chrome ulceration anthrax, silicosis, toxic anaemia, toxic jaundice, primary epitheliomatous cancer of the skin, or pathological manifestations due to radium or other radio-active substance or X-rays.

## Chapter X Supplemental

Rules prescribed under sub-section (1) of section 107

## 101. Procedure in appeals.

- [(1) An appeal presented under section 107 shall be with Chief Inspector, or in case where the order appealed against is an order passed by that officer, with the State Govt. or with such authority as the State Government may appoint in this behalf and shall be in the form of memorandum setting forth concisely the ground of objection to the order and bearing court-fee stamps in accordance with Article 11 of Schedule II to the Court-fee Act, 1870. and shall be accompanied by a copy of the order appealed against.] [Substituted by West Bengal Factories (Amendment) Rules, 1991.](2)On receipt of the memorandum of appeal, the appellate authority shall, if the appellant has requested that the appeal should be heard with aid of assessors, call upon the appellant to deposit an amount to be fixed by him for payment to the assessors, if necessary, after conclusion of the appeal.(3)On receipt of the memorandum of appeal, the appellate authority shall, if it thinks fit or if the appellant has requested that the appeal should be heard with the aid of assessors, call upon the registered association of employers declared under sub-rule (4) to be representative of the industry concerned, to appoint an assessor within a period of 14 days. If an assessor is nominated by such association, the appellate authority shall appoint a second assessor itself. It shall then fix a date for the hearing of the appeal and shall give due notice of such date to the appellant and to the Inspector whose order is appealed against, and shall call upon the two assessors to appear upon such date to assist in the hearing of the appeal.(4)If in the memorandum of appeal the appellant has requested that the appeal should be heard with the aid of assessors he shall state in the memorandum the name or names of registered associations of employers of which he is a member.(5)The association entitles to appoint the assessor within meaning of section 107 (2) of the Factories Act, 1948, shall be determined as hereinafter stated:-(a)If the appellant is a member of one such association it shall be that association.(b)If he is member of more than one such associations it shall be the association which the appellant desires should appoint the assessor.(c)If the appellant does not state in the memorandum that he is a member of any association mentioned under sub-rule (4) or if he does state which of (such associations, if he is a member of) more than one, he desires should appoint the assessor, then the appellate authority shall call upon the association which it considers be the best

fitted to represent the industry and to appoint the assessor.(6)An assessor appointed in accordance with provisions of sub-rules (3) and (5) shall receive, for the hearing of the appeal a fee to be fixed by the appellate authority, subject in a maximum of fifty rupees per diem. He shall also receive the actual travelling expenses. The fees and travelling expenses shall be paid to the assessors by Government; but where assessors have been appointed at the request of the appellant and the appeal has been decided wholly or partly against him the appellate authority shall direct that the fees and travelling expenses of the assessors shall be paid in whole or in part by the appellant out of the money deposited under sub-rule (2), and the balance of the deposit, if any, refunded to the appellant.Rule prescribed under sub-section (1) of section 108.

## **102. Display of notices.**

- The abstract of the Act and of the rules required to be displayed in every factor shall be as nearly as possible in Form No. 21.Rule prescribed under section 110.

## **103. Returns.**

- The manager of every factory shall furnish to the Inspector or other officer appointed by the State Government in this behalf the following returns, namely :-(1)Annual return.-Not later than the 31st January of the year subsequent to that to which it relates, an annual return, in duplicate, as nearly as possible in Form No. 22.(2)Half-yearly return.-Not later than the 15th July of each year, in duplicate, and as nearly as possible in Form No.23, for the period January to June of that year.(2a)[\* \* \*] [Deleted by the West Bengal Factories (Amendment) Rules, 1991](3)[ Quarterly return - Not later than 15th of the month of April/July/October/ January for the respective quarter beginning first of January/April/July/ October of the calendar year, as nearly as possible in Form 23 - A] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.]Rule prescribed under section 109.

## **104. Service of notice.**

- The despatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or Manager of a factory of such notice or order.Rules 105 to 107 prescribed under section 112.

## **105. Information required by the Inspector.**

- The occupier, owner or Manager of a factory shall furnish any information that an Inspector may required for the purpose of satisfying himself whether any provision of the Act has been complied with or whether any order of an Inspector has been duly carried out. Any demand by an Inspector for any such information, if made during the course of an inspection, shall be complied with forthwith if the information is available in the factory, or, if made in writing, shall be complied with within seven days of receipt thereof.Rules prescribed under section 112.



**105A. [ Production of records, forms registers etc.- The occupier or Manager of every factory shall produce before the Inspector on his demand any record, documents, form, register etc. kept maintained in pursuance of any provision of the Act and the rules framed thereunder.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.]**

**106. [ Register of accidents and dangerous occurrence - The manager of every factory shall maintain a Register of all accidents and dangerous occurrences, which occur in the factory, as nearly as possible in Form 24. Such register shall be maintained up-to-date and kept available in the factory for examination by an Inspector at all times during working of the factory.] [Substituted by ibid.]**

**107. Filing and preservation of Inspectors reports, letters, etc.**

- All certificates, order, letter, reports or other documents issued by an Inspector or other officer duly appointed in this behalf by the Government or by a local authority with respect to the fitness or safety of the factory or any portion of its buildings, works, plant, machinery apparatus or ways, or with respect to the fitness or workers employed in the factory shall be properly filed and preserved for a period of three years and shall be available in the factory for examination by the Inspector. Rules prescribed under section 112.

**107A. [ Cost of medical examination. - In respect of any worker of a factory, when it is necessary to carry out any clinical or other tests for the purpose of a medical examination specified under any provision of the Act and the rules framed thereunder, the cost of such test or tests shall be borne by the occupier of the factory and shall not be recovered from that worker.] [Inserted by the West Bengal Factories (Amendment) Rules, 1991.]**

**108. Savings.**

- Any licence granted, notification issued, order made or anything done under any of the provisions of the West Bengal Factories Rules, 1949, shall, unless inconsistent with these rules, be deemed to have granted, issued, made or done under the corresponding provisions of these rules. Form No. 1 (See rules 3) Application for permission to construct, extend or take into use any building as a factory

**1. Applicants name .....**

**2. Full name and postal address of the factory .....**

**3. Situation of the factory .....**

District .....Town or village .....Police-station  
.....Nearest Railway Station or Steamer Ghat .....

**4. Particulars or plant to be installed .....**

Signature of Applicant .....Date.....Note:- This  
Application shall be accompanied by the following documents : (a) A flow chart of the manufacturing  
process supplemented by a brief description of the process in its various stages. (b) Plans, in  
duplicate, showing - (i) the site of the factory and immediate surroundings including adjacent  
buildings and other structures, roads, drains, etc. and (ii) the plan, elevation and necessary  
cross-sections of the various buildings, drawn to scale, indicating all relevant details relating to  
natural lighting, ventilation and means of escape in case of fire. The plans shall also clearly indicate  
the position of the plant and machinery, aisles and passage ways. [\*Registration/For the year [Strike  
out which is not applicable.].....Renewal

.....Registration No .

.....Unregistered/Registered (Strike out whichever is not  
applicable). Registration No. \_\_\_\_\_ Classification No. \_\_\_\_\_ Form  
No. 2 (See rules 4, 6, 7, 8 and 13). Application for Registration and Grant or Renewal of Licence and  
Notice of occupation specified in Section 6 and 7 of the Factories Act, 1948 (To be submitted in  
Duplicate)

**1. (a) Full Name of the Factory .....**

(b) Previous Name of the factory (if different from the present name)

.....

**2. (a) Situation of the Factory :**

Address .....Post Office .....Telegraph Office  
.....District .....Sub divl. Headquarters .....Police station  
.....(b) Address of the Registered Office/Head Office  
.....

**3. Address to which communications relating to the factory may be sent**

.....

**4. Name and residential address of the owner of the premises occupier as a Factory .....**

**5. Nature of the Manufacturing process/processes :-**

(a) Carried on in the factory during the proceeding twelve months (if the factory was then in existence) ..... (b) To be carried on in the factory during the next twelve months .....

**6. Name, Age, Father's Name ; Present & Permanent residential address and P.S. of the Manager for the purpose of the Factories Act :-**

Name ..... Age ..... Father's Name .....  
..... Present Address ..... P.S .....  
..... Permanent Address ..... P.S .....

**7. Father's Name and residential address of Director/Partner/Proprietor :-**

(a) Directors in case of company ..... (b) Partners/Proprietors .....  
..... (Enclose separate sheet if necessary.)

**8. Name, Age, Father's name and Present & Permanent residential address and P.S. of the occupied as per provision of section 2(n) of the Act (a) Director in case of a company (b) a partner in case of a firm or proprietor:**

Name (In full) ..... Age ..... Father's Name .....  
..... Present Address .....  
..... P.S ..... Permanent Address .....  
..... P.S .....

**9. (a) Nature and total amount of power installed or proposed to be installed (Total rated H.P. in all cases except electricity generating station)**

.....

(b) In case of change in power installed, state the date of change-

**10. Maximum number of workers (including contract labour), likely to be employed in the factory on any day during the next twelve months:-**

(i) Men ..... (ii) women ..... (iii) Adolescents (over 15 but under 18 years of age) (a) Male ..... (b) Female ..... (iv) Children (over 14 but under 15 years of

age):- (a) Male ..... (b) Female ..... Total .....

**11. (a) Maximum number of workers (including staff, officers, contract labour, etc.) employed on any day during the previous twelve months .....**

(b) In case of change in number of workers, state the date of change .....

**12. In case of a factory constructed or extended or taken into use after the date of commencement of Rule :-**

(a) Reference number and date of approval of plans by the State Government/Chief inspector .....  
 (b) Reference number and date of approval of the arrangements, if any, made for disposal of trade waste and effluents .....

**13. Amount of Fee/Renewal Fee Rs. .... (Rupees) ..... paid in ..... Treasury.**

Bank on ..... (vide Challan No ..... Date ..... enclosed) for the year/years ending 31st December, .....

**14. In case of registered factories number and date of issue of original licence :**

(a) Licence No. .... (b) Date of Issue ..... Signature of Manager (Full name of the Manager in Block letters should be stated) Signature of occupier (Full name of the Occupier in Block letters should be stated) Note : (i) "Occupier" of a factory means the person who has ultimate control over the affairs of the factory, as defined under the provisions of section 2(n) of the Factories Act, 1948. (ii) This form should be completed in ink, block letters or typed, clearly and legibly, and submitted to the Chief Inspector of Factories, accompanied by the licence and original Treasury Challan. (iii) Informations not included above may be submitted in separate sheets, if necessary. [Form No. 3 [Substituted By Notification No. 340 L.W./L.W./IR-4/85 dated 9th April, 1986.] [See rules 5(1), 6(4), 7(1) and 8(2)] Government of West Bengal Symbol Directorate of Factories Licence for running a factory Licence No ..... Reg. No .....  
 ..... Licence is hereby granted to the Occupier of the factory known as ..... situated at ..... for running the factory within the limits stated hereinafter, subject to provisions of the Factories Act, 1948, and the rules made there under. The ..... 19 ..... Issuing Authority .....

Valid for

Calendar year	Maximum No. of workers on	Maximum rated Horse Power to be used or	Fee in Rupees	Date of Payment	Excess fee for late payment in	Date of Payment	Signature of the Issuing Authority
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any one day power generated rupees  
in K.W.

Granted  
under rule

5

Renewed  
under rule

6

Amendment (under rule 7)

Year	Amended	Amendment fee in Rupees	Date of Payment	Excess fee for late payment in rupees	Date of Payment	Signature of the Issuing Authority
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Workers Power rated  
HP/K.W.

Transfer (under rule 8)

To whom transferred	Year of transfer	Date of payment of transfer fee	Signature of the Issuing Authority
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Condition - [Form No. 3A] [Inserted by West Bengal Factories (Amendment) Rules, 1991.] (See rule 13A) Notice of Change of Manager

**1. (a) Name of factory :** \_\_\_\_\_

(b) Current Licence number : \_\_\_\_\_

**2. Postal address of factory :** \_\_\_\_\_

**3. Name of outgoing Manager :** \_\_\_\_\_

**4. (a) Name of new Manager :** \_\_\_\_\_

(b) Residential address (i) Permanent : \_\_\_\_\_ with telephone No. (ii)  
Present: \_\_\_\_\_

**5. Date of appointment of new Manager :** \_\_\_\_\_

**6. Signature of new Manager:** \_\_\_\_\_

Signature of Occupier Date : \_\_\_\_\_ Form No. 4 (See rule 16) Certificate of Fitness

1. Serial No..... Token No.....Date.....2. Name.....3. Father's Name.....4. Sex.....5. Residence.....6. Certified age and date of birth,if available.....7. Physical fitness.....8.Descriptive marks.....{|

Thumb impression

Initials offCertifying Surgeons. | Serial No..... TokenNo.....Date.....I certify that I have personallyexamined (name).....son/daughter of.....residing at.....who is desirous of being employedin a factory, and his/her age, as nearly examination,is..... year, and thathe/she is fit for employment in a factory as an adult/child.His/her descriptive marks are.....

Thumb impression

Certifying Surgeons. |}Note - Exact details of cause of physical disability should be clearly stated.Form No.5(See rule 24)Humidity RegisterDepartment .....Hygrometer {Distinctive mark of number .....Hygrometer{ Position on department ..... Readings of Hygrometer

Date-Year, month, day

Dry bulb

1st2nd3rd4th5th6th7th8th9th10th11th12th13th14th15th16th17th18th19th20th21st22nd23rd24th25th26th27th28th29th30th

(Signed).....Certified that the above entries are correct.(Signed).....Form No. 6(See rule 18 and 42)Register of lime washing, painting etc.

Parts of factory e.g., name of room	Parts lime washed, painted, varnished or oiled,e.g. walls, ceiling, wood work etc.	Treatment, whether lime-washed, painted, varnished or oiled	Date on which lime washing, painting, oiling orcleaning was carried out (according to	Remarks

English  
Calendar)

			Date	Month	Year	
1	2	3	4	5	6	7

[Form No. 7 [Substituted by Amendment Rules, 1991.](See rule 53)Register of Specially Trained Workers

**1. Name of factory** \_\_\_\_\_

**2. Name of worker** \_\_\_\_\_

**3. Serial No. as in the Register of Adult Workers in Form No. 13:** \_\_\_\_\_

**4. Date of birth and age** \_\_\_\_\_

**5. Nature of work** \_\_\_\_\_

**6. Experience/Training, if any, or period of service in similar work before appointment** \_\_\_\_\_

**7. Date of appointment:** \_\_\_\_\_

**8. Dates when right fitting clothing was provided** \_\_\_\_\_

**9. Remarks** \_\_\_\_\_

**10. I certify that the above mentioned worker whose signature/left hand thumb impression is given below is a properly trained adult male workers who is competent to mount or ship belts, lubricate or do other adjusting operation on the machinery, as prescribed in the proviso to sub-section (1) of Section 22 of the Act, in my factory.**

Signature/left thumbimpression of workerSignature of OccupierDate:.....Form No. 8(See rule 55)Name of Occupier .....Address of factory .....

## Part I – Test and Thorough Examination of Lifting Machine, Chains, Ropes or Lifting Tackle (except fibre ropes or slings) before being taken into use in any factory for the first time in that factory

Distinguishing number or mark and descriptionsufficient the machine, chain, rope or lifting tackle	Certificate of Test and thorough Examination	Name and address of person who issued thecertificate	
Date of certificate	Number of certificate		
1	2	3	4

## Part II – Annual thorough examination of all Lifting Machines, Chains, Ropes or Lifting Tackle

Distinguishing number of mark to identify thelifting machine, chain, rope or lifting tackle	Number of certificate of test and examination	Date when the lifting machine, chain, rope orlifting tackle was first taken into use in the factory	Date and by whom carried out	Particulars of any defects affecting the safeworking load and of the steps taken to remedy such defects (To beinitialed)	
Date and name	Date and name	Date and name			
(1)	(2)	(3)	(4)	(5)	(6) (7)

## Part III – Annealing or other approved form of heat treatment of Chains, or Lifting Tackles except Rope Sling

Distinguishing number or mark and description toidentify the chain or lifting tackle	Number of Certificate of test and examination	Dates of Annealing or other Heat Treatment and bywhom carried out	Particulars of any defects affecting the safeworking load and of the steps taken to remedy such defects.
Date and name	Date and name	Date and name	



Form No. 8A(See rule 54A)Report of Examination of Hoists And Lifts

**1. Name and address of factory:**

**2. Name of Occupier:**

**3. (a) Type of hoist or lift and identification number of description.**

(b)Date of construction or reconstruction:

**4. Are all parts of hoist or lift of good-mechanical construction, sound material and adequate strength (so far as ascertainable)?**

**5. Are the following parts of the hoist or lift properly maintained and in good working condition? If not state the defects observed:**

(a)Enclosure of hoistway or liftway:(b)Landing gates and cage gate (s):(c)Interlock of the said two gates:(d)Other fastening of the gates:(e)Cage and platform and fittings, guides, buffers, interior of the hoistway or liftway:(f)Overrunning devices:(g)Suspension ropes or chains and their fittings.(h)Safety gear i.e. arrangements for preventing fall of platforms or failure of cage brakes.(i)Brakes:(j)Worm of spur gearing:(k)Other electrical equipment(l)Other parts

**6. What parts if any, were Inaccessible ?**

**7. Repairs, renewals or alterations (if any) required and the period within which they should be executed:**

**8. Maximum safe working load subject to repairs, renewals, or alterations (if any) specified against items:**

**9. Other particulars, if any:**

I/We certify that on (date): I/We thoroughly examined the hoist/lift as indicated above and that the above is a correct report of the result.If employed by a Company or Association name and address of the Company/Association:Signature .....Qualification  
.....Address .....Date  
.....Form No. 9(See rule 56)Report of examination of pressure vessel or plant

1. Name of factory .....

2. Situation and address of factory .....
3. Name, description and distinctive number of pressure vessel or plant .....
4. Name and address of manufacturer and reference to their certificate or certificate of competent person .....
5. Nature of process in which it is used .....
6. Particulars of pressure vessel or plant
  - (a) Date of construction .....
  - (b) Thickness of walls .....
  - (c) Date on which the pressure vessel or plant was first taken into use .....
  - (d) Maximum permissible working pressure recommended by the manufacturer .....
  - (e) Design pressure, if known .....
 (The history should be briefly given, and the examiner should state whether he has seen the last previous report) .....
7. Date of last hydrostatic test (if any) and pressure applied .....
8. Is the pressure vessel or plant in open, or otherwise exposed to weather or to damp? .....
9. What parts (if any) were inaccessible? .....
10. What examination and test were made? (Specify .....

pressure if hydrostatic  
or pneumatic test was carried  
out)

11. Condition of pressure  
vessel or plant. (State any  
defects materially affecting  
the maximum permissible      External.....Internal.....  
working pressure or the safe  
working of the pressure  
vessel of plant.)

12. Are the required fitting  
and appliances provided .....  
in accordance with the Rules?

13. Are all fitting and  
appliances properly  
maintained and in good  
conditions? Have the .....  
pressure setting been  
checked and corrected?

14. Repairs (if any) required,  
and period within they  
should be executed and any  
other condition which the .....  
person making  
the examination thinks it  
necessary to specify for  
securing safe working.

15. Maximum permissible  
working pressure, calculated  
from dimensions and from  
the thickness and other data  
ascertained by the present  
examination, due allowance  
being made for conditions of .....  
working if unusual or  
exceptionally severe. (State  
minimum thickness of walls  
measured during the  
examination.)

16. Where repairs affecting  
the maximum working  
pressure are required, state .....  
the working pressure—

(a) Before the expiration of the period specified in (14) .....

(b) After the expiration of such period if the required repairs have not been completed .....

(c) After the completion of the required repairs .....

#### 17. Other observations

I certify that on (date) ..... the pressure vessel or plant described above was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination and for such tests as were necessary for thorough examination and that on the said date, I thoroughly examined this pressure vessel or plant, including its fittings, and that the above is a true report of my examination. Signature ..... Qualification .....

Address ..... Date ..... If employed by a Company or Association, give name and address .....

[Form No. 9A [Inserted by West Bengal Factories (Amendment) Rules, 1991.](See rule 56A) Register of Examination of Gasholders

Distinguishing number or letter of gasholder	Particulars of Manufacture	Particulars of examination carried out under sub-rule (4) and (5) of rule 56A		Maximum capacity in cubic meters	Pressure thrown by gasholder when full of gas	Method of examination used	Date of examination	Name and designation of the person making this examination
		Particulars of examination carried out under sub-rule (4) and (5) of rule 56A	Particulars of repair					
Maker's Name	Date of Manufacture	Number of lifts						
1	2	3	4	5	6	7	8	

Signature of occupier: ..... Or Manager ..... [Form No. 9B] [Inserted by West Bengal Factories (Amendment) Rule, 1991.](See Rule 56A) Report of Examination of Water Sealed Gasholder

### 1. Name of occupier (or factory):

### 2. Situation and address of factory:

**3. Name, description, distinguishing number of letter and type of gasholder:**

**4. Name and address of the Manufacture:**

**5. (a) Number of lifts:**

(b)Maximum capacity in cubic meters:(c)Pressure thrown by holder when full of gas:

**6. Particulars of gas to be stored in the holder:**

**7. Particulars as to the condition of**

(a)corwn .....(b)side sheeting, including grips and cups.(c)guiding mechanism (Roller carriages, rollers, pins, guide rails or ropes):(d)tank, and .....(e)other structure, if any (columns, framing and bracing):

**8. Particulars as to the position of the lifts at the time of examination:**

**9. Particulars as to whether the tank and lifts were found sufficiently level for safe working and if not, as to the steps taken to remedy the defect.:**

**10. Date of examination and by whom it was carried out:**

**11. Condition of vessel**

(a)External .....(b)Internal .....

**12. (a) Are all fittings and appliances properly maintained in good condition?**

(b)Repairs, if any, required and period within which they should be executed:(c)Any other condition which the person making the examination thinks it necessary for securing safe working:

**13. Other observation .....**

"I certify that on (date) ..... the gasholder described above was thoroughly examined and such of the tests as were necessary, have been made on the same day and that the above is a true of my examination.Signature .....Qualification .....Address .....Date .....If employed by Company or association name and address of the company or association.";Form No. 10(See rule 78)Register of Compensatory Holidays

Name

Year

Remarks

Serial No.	Number in the register of workers		Group and Relay No.	No. of exemption Rule or No. and date of exemption order	Weekly rest days lost due to exemption rule or exemption order in-	Dates of compensatory holidays given in-	Lost rest days carried to the next year	
January to March	April to June	July to September	October to December	January to March	April to June	July to September	October to December	
1	2	3	4	5	6	7	8	9

Form No. 11(See rule 80)Overtime Muster Roll for Exempted Workers\* Quarter ending 31st March, 19 .....\* Quarter ending 30th June, 19 .....\* Quarter ending 30th September, 19 .....\* Quarter ending 31st December, 19 .....

No. in Register	Name	Department	Overtime worked by time or piece workers during week ending .....	Total over-time hours of time or piece workers for each week as taken from the register maintained under the Exemption	Time workers normal rate of pay per hour (inclusive of allowances)	Total amount payable as over-time to time workers	Normal time rate per hour for piece workers based on production	Total amount payable as over-time to pieceworkers
-----------------	------	------------	---	--	--	---	---	---

\*Strike out the quarter not requiredForm No.12(See rule 82 and 84)Notice of Periods of work for adult or child worker

Name of factory ..... Place .....

Starting time ..... Intervals for rest ..... Stopping time .....

From— To

Sunday ...Monday ...Tuesday  
 ....Wednesday...Thursday ...Friday  
 ....Saturday ....

Signature of Manager .....Date .....Form No. 12A(See rule 82 and 84)Notice of Periods of work for adult or child workerName of Factory ..... Place .....

Group No ..... Group No .....

	Nature of work .....	Nature of work .....	
	Starting time	Intervals for rest	Stopping time
From-	To-	From-	To-
SundayMondayTuesdayWednesdayThursdayFridaySaturday			
Signature of Manager .....Date .....Form No. 12B(See rules 82 and 84)Notice of Periods of work for adult or child workerName of Factory ..... Place .....			

Group No.....	Relay No .....
Nature of work.....	
Relay No .....	Relay No .....

	Starting time	Interval
From-	To—	From-
SundayMondayTuesdayWednesdayThursdayFridaySaturday		
Signature of Manager .....Date .....Form No. 13(See rule 83)Register of Adult Workers		
For the month of .....19.....theperiod .....19.....to.....19.....		

Serial No.	Name	Nature of work	Group No.	Relay No.	Particulars of transfer from one group or relay to another	No. and date of certificate, if an adolescent	Number of hours worked each day	Remarks
No. of certificate and date	Token No. giving reference to the certificate	1	2	3	4	5	6	7

Form No. 14(See rule 85)Register of Audit Workers

For the month of .....20.....theperiod .....20.....to.....20.....

Serial No.	Name	Father's Name	*Date of birth (if available and/or certificate of age)	Date of first employment	No. of certificate and its date	Token No. giving reference to certificate	Group No.	No. of relay if working in shifts	No. of hours worked each day	Remarks
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Calendar year	No. of days leave earned in the immediately preceding calendar year	No. of days leave brought forward (from previous year of years)	Actual No. of days worked during the calendar year shown in column 1	Date from which the worker is allowed leave (shown in columns 2 & 3) and No. of days allowed	Rate of wages for the period of leave	Amount of wages for the period of leave	Date of payment	Remarks	
	Maternity Leave (Female worker)	Leave earned in the immediately preceding calendar year and enjoyed during the year	Others						
1	2	3	4	5	6	7	8	9	10

Calendar Year	No. of days leave earned in the immediately preceding year	No. of days brought forward	Date of absence	Actual no. of days worked	Date from which the	Rate of wages for the period	Amount of wages for the	Date of payment	Remarks	Signature of the Manager or his authorized representative
---------------	--	-----------------------------	-----------------	---------------------------	---------------------	------------------------------	-------------------------	-----------------	---------	---



	calendar year	previous year or years)	during the calendar shown in column 1	worker is of allowed leave (shown in columns 2 & 3) and No. of days allowed	period of leave						agen
		Leave earned in the immediately preceding calendar year and enjoyed during the year	Others								
Lay off	Maternity Leave (Female worker)										
1	2	3	4	5	6	7	8	9	10	11	

Note:- (1) The leave book shall be made out separately for each worker on thick bound sheets which may be folded. (2) No of days leave earned = Column (8)/20 for adult and Column (8)/15 for child. [Form No. 16A [Inserted by West Bengal Factories (Amendment) Rules, 1991] (See rule 93) Nomination for Payment of Wages Due for Annual Leave Under Section 80 in the Event of a worker I Sri ..... hereby require that in the event of my death, while in service, all wages due for annual leave as payable under section 80 shall be paid to my nominee ..... who is my ..... and resides at

..... Attested by  
witnesses Signature or thumb impression of worker.

## 1. Signature: Particulars of worker, such as Sr. No. in the Register of Audit Workers, Section, Department, Token No. etc.

Name : Designation : Address :

## 2. Signature :

Name : Designation : Address : Form No. 17 (See rule 63 and 94) Health Register

## 1. Serial Number in the Register of audit workers :

**2. Name of worker :****3. Sex :****4. Date of birth :**

Department Works	Name of hazardous process	Dangerous process/operation	Nature of job or occupation	Raw materials. products or by-products likely to be exposed to	Date of posting	Date of leaving/transfer other work	Reason for discharge to other
Signs and symptoms observed during examination	Nature of tests & results thereof	Result Fit /Unfit	Period of Temporary withdrawal from that work	Reason for such withdrawal	Date of declaring him unfit for that work	Date of issuing fitness Certificate	
1	2	3	4	5	6	7	8

Note: 1. Separate page should be maintained for individual worker.

**2. Fresh entry should be made for each examination.**

Form No. 17 A(See rule 49)Record of Eye Examination

Serial No.	Department/Works	Name of Workers	Sex	Age (on last birthday)	Occupation	Examination of Eyesight	Signature of Ophthalmologist	Remarks
Nature	Date of employment	Date	Result					
1	2	3	4	5	6	7	8	9

Form No. 18(See rule 95 and 96)Notice of Accident

**1. Name of occupier (or Factory)Employer**

E.S.I. Employer's Code No.

**2. Address of factory/premises where accident took place**

**3. Nature of industry**

**4. Branch or department and exact place where the accident took place**

**5. Name and address of the injured**

E.S.I. Employer No.

**6. (a) Sex**

(b)Age (last birthday)(c)Occupation of the injured person

**7. Local E.S.I. Office to which the injured person is attached**

**8. Date, shift and hour of accident**

**9. (a) Hour at which the injured person started work on the day of accident**

(b)Whether wages in full or part are payable to him for the day of the accident

**10. Cause of accident-**

(a)If caused by machinery-(i)Give name of the machine and the part causing the accident(ii)State whether it was moved by mechanical power at that time(b)State exactly what the injured person was doing at that time(c)In your opinion, was the injured person at the time of accident-(i)acting in contravention of provisions of any law applicable to him?Or(ii)acting in contravention of any orders given by or on behalf of his employer?Or(d)In case reply to (c) (i), (ii) or (iii) is in the affirmative, state whether the act was done for the purpose of and in connection with the employer's trade or business.

**11. In case the accident happened while travelling in the employer's transport, state whether -**

(i)the injured person was travelling as a passenger to or from his place of work;(ii)the injured person was travelling with the express or implied permission of his employer;(iii)the transport is being operated by or on behalf of the employer or some other person by whom it is provided in pursuance of arrangements made with the employer;(v)the vehicle was being/not being operated in the ordinary course of public transport vehicle;

**12. In case the accident happened while meeting emergency, state**

(i) its nature; (ii) whether the injured person at the time of accident was employed for the purpose of his employer's trade or business in or about the premises at which the accident took place.

**13. State how the accident occurred**

**14. Names and address of witnesses**

(a) (b) 15. (a) Nature and extent of injury (g.g., fatal, loss of finger, fracture of leg, scale of scratch and followed by sepsis) (b) Location of injury (right leg, left hand or left eye, etc.)

**16. (a) If the accident is not fatal, state whether the injured person was disabled for 48 hours or more**

(b) Date and hour of return to work

**17. (a) Physician, dispensary or hospital from whom or in which the injured person received or is receiving treatment.**

(b) Name of dispensary/panel doctor selected by the injured person

**18. (i) Has the injured person died**

(ii) If so, date of death I certify that to the best of my knowledge and belief the above particulars are correct in every respect. Date ..... Signature of the Manager  
Form No. 19 (See rule 99 and 106) Notice of dangerous occurrence which does not result in death or bodily injury  
Dated ..... 20 ..... To Sir, I hereby give notice under section 88 of the Factories Act, 1948, that a dangerous occurrence occurred in the factory as detailed below:-

**1. Date and hour of dangerous occurrence**

.....

**2. Full account of the dangerous occurrence**

.....

**3. Names of person who saw the dangerous occurrence and can give important evidence.....**

Name of factory ..... Name of industry ..... Branch or department where the dangerous occurrence occurred ..... Address

..... Signed .....Note: Any additional  
information which the Manager may wish to give in order to let the Inspector have a clear idea of the  
circumstances surrounding the dangerous occurrence, should be attached to this form. Form No.  
20(See rule 100)Notice poisoning or diseaseTo be filled in by the Chief InspectorNo. of Case  
.....Remarks.....

**1. Name and address of factory .....**

**2. Address of office or private residence of occupier**  
.....

**3. Nature of industry .....**

**4. Name and works Number of Patient .....**

**5. Address of patient .....**

**6. Sex .....**

**7. Precise occupation of patient .....**

**8. Nature of Poisoning or Disease from which Patient is suffering .....**

**9. Has the case been reported to the Certifying Surgeon? .....**

Signature of Manager .....Dated .....Form No. 21(See rule 102)Abstract of  
the Factories Act, 1948andWest Bengal Factories Rules, 1958(To be affixed in a conspicuous and  
convenient place at or near the main entrance to the Factory)Working hours, holidays, intervals for  
the rest, etc.

**1. Hours of Work (Adults). Sections 51 and 54. - No adult worker shall be required, or allowed to work in a factory for more than 48 hours in any week and for more than 9 hours, in any day.**

**2. Relaxation of Hours of Work (Adults). Section 5, 64 and 65. - Limits on working hours are those prescribed by sections 51 and 54, viz. 48 hours a week and 9 hours a day. These limits cannot be exceeded except (1) in cases of public emergency declared by the State Government under section 5(2) in cases of work covered by the exemption rules framed under section 64. and (3) in cases of permission given by the State Government or the Chief**

**Inspector of Factories for dealing with exceptional pressure of work.**

**3. Payment for Overtime. Section 59. - Where by virtue of the exemption rules or exempting order a worker works in a factory for more than 9 hours in any day or more than 48 hours in any week he shall, in respect of overtime work be entitled to wages inclusive of allowances at the rate of twice his ordinary rate of wages.**

**4. Weekly Holiday (Adults). Section 52. - No adult worker shall be required or allowed to work in a factory on the first day of the week, unless he has, or will have, holiday for a whole day on one of the three days immediately before or after the said day, and the Manager of the factory has, before the said day or the substituted day, whichever is earlier, delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted, and displayed a notice to that effect in the factory :**

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day. Where a worker in a factory, as a result of exemption from the ordinary provision relating to weekly holidays he shall be allowed, within the month in which the holidays were due to him or within the two months immediately following that month, compensatory holidays of equal number to the holidays so lost.

**5. Intervals for Rest and Spreadover (Adults). Sections 55 and 56. - The periods of work of adult workers in a factory each day shall be so fixed that no period shall exceed 5 hours before he has had an interval rest of at least half an hour and that inclusive of his intervals for rest they shall not spread over more than 10½ hours in any day. With the permission of the State Government or the Chief Inspector in writing the period worked without an interval may be increased to 6 hours and the spread over to 12 hours.**

**6. Prohibition of Double employment. Section 60, 71 and 99. - No child or, except in certain circumstances, adult worker shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.**

If a child works in a factory on any day on which he has already been working in another factory, the parent or guardian of the child or the person having custody of or control over him or obtaining any direct benefit from his wages shall be punishable with fine, which may extend to Rs.50 unless it

appears to the court that the child so worked without, the consent or connivance of such parent, guardian or person.

**7. Prohibition of employment of Children Under 14. Section 67. - No child who has not completed his fourteenth year shall be required or allowed to work in any factory.**

**8. Hours of work (Children), Section 71. - No child shall be employed or permitted to work in any factory for more than 4½ hours in any day during the night.**

The provision relating to weekly holidays shall also apply to child workers.

**9. Prohibition of Employment of Women, Section 68. - No woman unless authorised by the State Government in this behalf shall be employed in any factory for more than 9 hours in any day or between the hours of 7 p.m. and 6 a.m.**

Leave with Wages

**10. Leave with Wages. Section 79, 80 and Rules. - (a) Every worker who has worked for a period of 240 days or more in a factory during a calendar year shall be allowed during the subsequent calendar year, leave with wages for a number of days calculated at the rate of -**

(i) If an adult, one day for every twenty days of work performed by him during the previous calendar year. (ii) If a child, one day for every fifteen days of work performed by him during the previous calendar year. (b) For the leave allowed to him, a worker shall be paid at a rate equal to the daily average of his total full-time earning or the days on which he worked during the month immediately preceding his leave, exclusive of any of overtime and bonus but inclusive of dearness allowance and the cash equivalent of the advantage accruing through the concessional sale to the worker of food grains and other articles. (c) A worker whose service commences otherwise than on the first day of January, shall be entitled to leave with wages at the rate stated above if he has worked for two thirds of the total number of days in the remainder of the calendar year. (d) If a worker is discharged or dismissed from service during the course of the year he shall be entitled to leave with wages at the rate stated above even if he has not worked for the entire period entitling him to earn leave. (e) If the employment of a worker who is entitled to leave in accordance with (a) or (c), as the case may be, is terminated by the occupier before he has taken the entire leave to which he is entitled, or it having applied for and having not been granted such leave, the worker quits his employment before he has taken the leave, the occupier of the factory shall pay him the amount payable in respect of the leave not taken, and such payment be made, where the employment of the worker is terminated by the

occupier, before the expiry of the second working day after such termination, and where a worker who quits his employment, on or before the next pay day.(f)The Manager shall maintain a leave with wages register in the prescribed Form No. 15 shall provide each worker with a book called "Leave Book" in the prescribed Form No. 16. The Leave Book shall be expressly entrusted to the worker for custody and the Manager or his agent shall not demand it except to make relevant entries therein whenever necessary and shall not keep it for more than a week at a time. If a worker loses his Leave Book, the Manager shall provide him with a copy of payment of one anna and shall complete it from his record.(g)Every worker shall declare his nominee to whom his leave pay shall be paid if he dies before availing leave due.Health

**11. Cleanliness. Section 11. - The Precincts of factory, floors of work-rooms, drains, etc. shall be kept clean as prescribed.**

**12. Drinking Water. Section 18. - In every factory effective arrangements shall be made to provide and maintain at suitable points, conveniently situated for all workers employed therein a sufficient supply of wholesome drinking water.**

In every factory wherein more than 250 workers are ordinarily employed the drinking water shall, during the hot weather, be cooled by the ice or other effective methods. The cooled drinking water shall be supplied in every canteen, lunch-room and rest room and also at conveniently accessible points throughout the factory.

**13. Latrines and Urinals. Section 19 and Rules. - In every factory sufficient latrine and urinal accommodation of the prescribed type (separate enclosed accommodation for male and female workers) shall be provided conveniently situated and accessible to workers at all times while they are at the factory.**

**14. Spittoons. Section 20. - In every factory, there shall be provided a sufficient number of spittoons of the type prescribed in convenient places and they shall be maintained in a clean and hygienic condition. No person shall spit except in the spittoons provided for the purpose. Whoever spits in contravention of this provision shall be punishable with fine not exceeding five rupees.**

Safety

**15. Fencing of Machinery. Section 21. - In every factory dangerous parts of machines shall be securely fenced by safeguards of substantial construction which shall be kept in position while the parts of machinery they are fencing**



are in motion or in use.

**16. Work on or near Machinery in Motion. Section 22. - No woman or young person shall be allowed to clean, lubricate or adjust any part of a prime mover or of any transmission machinery while the prime mover or transmission machinery is in motion, or to clean, lubricate or adjust any part of any machine if the cleaning, lubrication or adjustment thereof would expose the woman or young person to risk of injury from any moving part either of the machine or of any adjacent machinery.**

**17. Employment of Young Persons on Dangerous Machinery. Section 23. - No young person shall work at any machine declared to be dangerous unless he has been fully instructed as to the dangers arising in connection with the machine and the precautions to be observed and has received sufficient training in work at the machine or is under adequate supervision by person who has a thorough knowledge and experience of the machine.**

**18. Casing of New Machinery. Section 26. - In all machinery driven by power and installed in any factory after 151 April 1949 every set screw, bolt or key on any revolving shaft, spindle, wheel prevent danger, all spur, worm and other toothed or friction gearing which does not require frequent adjustment while in motion shall be completely encased, unless it is so situated as to be as safe as it would be if it were completely encased. Whoever sells or lets on hire, or as agent of a seller or hirer, causes or procures to be sold or let on hire, for use in a factory any machinery driven by power which does not comply with these provisions, shall be punishable with imprisonment of a term which may extend to three months or with fine which may extend to five hundred rupees or with both.**

**19. Prohibition of Employment of Women and Children near Cotton Openers. Section 27. - No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.**

**20. Excessive Weight. Section 34. - No woman or young person shall, unaided by another person, lift, carry exceeding the following limits :---**

1bs.

Adult female           ... .. 65

Adolescent male	... ..	65
Adolescent female	... ..	45
Male child	... ..	35
Female child	... ..	30

**21. Protection of Eyes. Section 35. - Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the vicinity of processes which involve risk or injury to the eyes from particles of fragments thrown off in the course of the process or which involve risk of injury to the eyes by reason of exposure to excessive light.**

**22. Precautions in case of Fire. Section 38. - Every factory shall be provided with adequate means of escape in case of fire for the persons employed therein. The doors affording exit from any room shall, unless they are of the sliding type, be constructed to open outwards. Every window, door or other exit affording a means of escape in case of fire, other than the means of exit in ordinary use, shall be distinctively marked. Effective and clearly audible means of giving warning in case of fire to every person employed in the factory shall be provided. Effective measures shall be taken to ensure that wherein more than twenty workers are ordinarily employed in any place above the ground-floor, or wherein explosive or highly inflammable materials are used or stored, all the workers are familiar with the means of escape in case of fire and have been adequately trained in the routine to be followed in such case.**

#### Welfare

**23. Washing facilities. Section 42. - In every factory adequate and suitable facilities for washing shall be provided and maintained for the use of the workers therein. Such facilities shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.**

If female workers are employed separate facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass.

**24. Facilities for storing and drying Clothing. Section 43 and Rules. - In the case of certain dangerous operations, e.g., lead processing liming and tanning of raw hides and skins etc., suitable places for keeping clothing not**

worn during working hours and for the drying of wet clothing shall be provided and maintained.

**25. Facilities for Sitting. Section 44. -** In every factory suitable arrangement for sitting shall be provided and maintained for all workers obliged to work in a standing position in order that they may take advantage of any opportunities or rest which may occur in the course of their work.

**26. First Aid and Ambulance Room. Section 45. -** There shall in every factory be provided and maintained so as to be readily accessible during all working hours first-aid boxes or cupboards equipped with the prescribed contents. All such boxes and cupboards shall be kept in the charge of a responsible person who is trained in first-aid treatment and who shall always be available during the working hours of the factory.

In every factory wherein more than 500 workers are employed there shall be provided and maintained an ambulance room of the prescribed size and containing the prescribed equipment. The ambulance room shall be in charge of a qualified medical practitioner assisted by at least one qualified nurse and such other staff as may be prescribed.

**27. Canteens. Section 46 and Rules. -** In every factory wherein more than 250 workers are ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for the use of the workers. Food, drink and other items served in the canteen shall be sold on a non-profit basis and the price charged shall be subject to the approval of a canteen Managing Committee which shall consist of an equal number of persons nominated by the Manager and elected by the workers. The number of elected workers shall be in the proportion of 1 for every 1,000 workers employed in the factory provided that in no case shall there be more than 5 or less than 2 workers on the Committee. The Committee shall be consulted from time to time as to the quality and quantity of foodstuffs to be served in the canteen, the arrangement of the menus, etc.

**28. Shelter, Rest-rooms and Lunch-rooms. Section 47. -** In every factory wherein more than 150 workers are ordinarily employed adequate and suitable shelters or rest-rooms and a suitable lunch-room, with provision for drinking water, where workers can eat meals brought by them shall be provided and maintained for the use of the workers.

**29. Creches. Section 48 and Rules. - In every factory wherein more than 50 women workers are ordinarily employed there shall be provided and maintained suitable room or rooms for the use of children under the age of six years, of such women. The Creche shall be adequately furnished and equipped and in particular there shall be one suitable cot or a cradle with the necessary bedding for each child, at least one chair or equivalent seating accommodation for the use of the mother while she is feeding or attending to her child and a sufficient supply of suitable toys for elder child.**

There shall be in or adjoining the Creche a suitable wash-room for the washing of the children and their clothing. An adequate supply of clean clothes, soap and clean towel shall be made available for each child while it is in the Creche. At least half a pint of clean pure milk shall be available for each child on every day. It is accommodated in the Creche and the mother of such a child shall be allowed in the course of her daily work suitable intervals to feed the child. For children above two years of age there shall be provided, in addition, an adequate supply of wholesome refreshment. A suitably fenced and shady open air play ground shall also be provided for the older children.

**30. Welfare Officers. Section 49. - In every factory wherein 500 or more workers are ordinarily employed the occupier shall employ in the factory such number of Welfare Officers as may be prescribed.**

#### Special Provisions

**31. Dangerous Operations. Section 87 and Rules. - The following operations have been declared to be dangerous :--**

Manufacture of aerated water and processes incidental thereto : electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds; manufacture of repair of electric accumulates; glass manufacture; grinding or glazing of metals; manufacture, treatment or handling of lead, lead alloys or certain compounds of lead; generating petrol gas from petrol; cleaning or smoothing of articles by a jet of sand, metal shot or grit or other abrasive propelled by a blast of compressed air or steam; liming and tanning of raw hides and skins and processes incidental thereto; feeding of jute, hemp or other fibres into softening machines; lifting, stacking, storing and shipping of bales in and from finished goods godowns of Jute Mills; manufacture, use or storage of cellulose solutions: manufacture of chromic acid or manufacture or recovery of the dichromate of sodium, potassium or ammonium; printing presses and type foundries certain lead processes carried therein.

**32. Notice of Accidents. Section 83 and Rules. - Where in any factory and accident occurs which causes death or which causes bodily injury by reason of which the person injured is prevented from working for a period of 48**

**hours or more immediately following the accident or which, though not attended by personal injury or disablement, appertains to fire, explosion, collapse of building, accident to plant, etc. the Manager of the factory shall forthwith send notice thereof to the inspector.**

**33. Notice of Certain Diseases. Section 89 and Rules. - Where any worker in a factory contracts any of the following diseases the Manager of the factory shall send notice thereof forthwith both the Chief Inspector and the Certifying Surgeon.**

Lead, phosphorous, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning; or poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of the alphabetic series; toxic jaundice; primary opitheliometous cancer of the skin, or pathological manifestations due to radium or other radio-active substance of X-rays.

**34. No Charge for Facilities and Conveniences. Section 114. - No fee or charge shall be realized from any worker in respect to be supplied by the occupier under the provisions of the Act.**

**35. Powers of Inspectors. Sections 9 and 82. - Inspectors have power to inspect factories any time and may require the production of registers, certificates, etc. prescribed under the Act and the Rules. Any inspector may institute proceeding on behalf of any worker to recover any sum required to be paid by an employer under the provisions relating to leave with wages, which the employer has not paid.**

**36. Obligation of Workers. Sections 97 and 111 - No worker in a factory-**

(i) shall wilfully interfere with or misuse any appliance, convenience or other thing provided in a factory for the purpose of securing the health, safety or welfare of the workers therein; (ii) shall wilfully and without any reasonable cause do anything likely to endanger himself or others; and (iii) shall wilfully neglect to make use of any appliance or other thing provided in the factory for the purpose of securing the health of safety of the workers therein. If any worker employed in a factory contravenes any of these provisions or any rule or order made thereunder he shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to Rs.100 or with both. If any worker employed in a factory contravenes any provisions of the Act or any rules or orders made thereunder imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 20.

**37. Certificates of fitness. Sections 68, 70 and 98. - No child who has completed his fourteenth year or an adolescents shall be required or allowed to work in any factory unless a certificate of fitness granted with reference to him is in the custody of the Manager of the factory and such child or adolescent carries, while he is at work, a token giving a reference to such certificate. Any fee payable for such a certificate shall be paid by the occupier and shall not be recoverable from the young person, his parents or guardian.**

An adolescent who has been granted a certificate of fitness to work in a factory as an adult and who while at work in a factory carries a token giving reference to the certificate shall be deemed to be an adult for all the purposes of the provisions of the act relating to the working hours of adult and the employment of young person. An adolescent who has not been granted a certificate of fitness to work in a factory as an adult shall, notwithstanding his age, be deemed to be a child for all the purposes of the Act. Whoever knowingly uses or attempts to use, as a certificate of fitness granted to himself, a certificate granted to another adolescent to work in a factory as an adult, or who having procured such a certificate knowingly allows it to be used, or an attempt to use it to be made, by another person, shall be punishable with imprisonment for a term which may extend to one month or with fine which may extend to Rs.50 or with both.

**38. Registers, Notices and Returns. Section 61, 62, 63, 72, 73, 74 and 110. - A register of adult workers in the prescribed Form No. 13 and a register of child workers in the prescribed Form No. 14 shall be maintained by the Manager of every factory.**

A notice of periods of work for adults and a notice of periods of work for children in the prescribed Form No. 12, form No. 12A or Form No.12B shall be correctly maintained and displayed in every factory. No adult worker or child shall be required or allowed to work in any factory otherwise than in accordance with their respective notices of periods of work displayed in the factory. The owners, occupiers or Managers of factories shall submit the prescribed periodical returns to the Inspector regularly.[Form 22] [As amended by Amendment Rules, 1991.][See Clause (1) of Rule 103]Annual Return Under The West Bengal Factories RulesClassification Code No.....Year ending 31st December, 19 .....

**1. Registration Number of Factory .....**

**2. Name of the Factory .....**

**3. Name of the Occupier .....**

**4. Name of the Manager .....**

**5. District .....**

**6. Full Postal Address of Factory .....**

**7. Nature of Industry .....**

Number of workers and particulars of employment

**8. Number of days worked in the year ...**

**9. Number of man days worked during the year:**

Adults-Men ..... Women.....Adolescents-Male..... Female  
.....Children-Boys..... Girls .....

**10. Average number of workers employed daily (See explanatory note) :**

Adults-Men ..... Women.....Adolescents-Male..... Female  
.....Children-Boys..... Girls .....

**11. Total number of man hours worked including overtime:**

Men ..... Women ..... Children .....

**12. Average number of hours worked per week (See explanatory note) :**

Men ..... Women ..... Children .....

**13. (a) Does the factory carry on any process or operation declared as dangerous under Section 87?**

(See Rule 94)(b)If so, give the following information :

Name of dangerous processes or operations carried on	Average number of persons employed daily in each of the processes or operations given in column 1
--	---

1

2

(i)

(ii)

(iii)

Leave with wages

**14. Total number of workers employed during the year :**

Men ..... Women Children ..... Children .....

**15. Number of workers who were entitled to annual leave with wages during the year :**

Men ..... Women Children ..... Children .....

**16. Number of workers who were granted leave during the year :**

Men ..... Women Children ..... Children .....

**17. (a) Number of workers who were discharged, or dismissed from the service, or who quit employment, or were superannuated, or who died while in service during the year .....**

(b) Number of such workers in respect of whom wages in lieu of leave were paid  
.....Safety Officers

**18. (a) Number of Safety Officers required to be appointed as per Notification under Section 40B .....**

(b) Details of safety Officers appointed:

Name of Safety Officer	Date of Appointment	Qualification	Name of the Institution from which he obtained a degree or diploma or a certificate in Industrial safety	**Name of the Institution from which thorough knowledge in Bengali was acquired and the examination passed	Date of passing the Viva voce Test under Clause(d) of Rule 4 of the West Bengal Factories (Safety Officers) Rules
1	2	3	4	5	6

(i)

(ii)

(iii)

Ambulance Room



**19. Is there an ambulance Room provided in the factory as required under Section 45 ? .....**

Canteen

**20. (a) No. of Canteens provided in the factory as required under Section 46.....**

(b)Is the Canteen provided managed/run :(i)departmentally, or  
.....(ii)through a contractor ? .....Shelters of Rest  
Rooms and Lunch Rooms

**21. (a) No. of shelters or Rest Rooms provided in the factory as required under Section 47 .....**

(b)No. of Lunch rooms provided in the factory as required under Section 47.....Crèches

**22. (a) No. of Crèches provided in the factory as required under Section 48  
.....**

(b)No. of children utilizing the crèche .....Welfare Officers

**23. (a) Number of Welfare Officers to be appointed as required under Section 49 .....**

(b)Details of Welfare Officers appointed :

Name of Welfare Officer	Date of Appointment	Name of the Institution from which he obtained a degree or diploma in Labour and Social Welfare or when he passed the L.W.O. Training Course of the Govt. of West Bengal*	**Name of the Institution from which thorough knowledge in Bengali was acquired and the examination passed	Date of passing the Viva Voce Test under Clause(d) of Rule 5 of the West Bengal Factories (Welfare Officers) Rules	Grade and Scale of Pay
1	2	3	4	5	6
(i)					
(ii)					
(iii)					

\* If he was exempted under Rule 6 of the West Bengal Factories (Welfare Officer) Rules, Please

quote the number and the date of Government order.\*\* To be furnished for officers whose mother-tongue is not Bengali. Accidents

## 24. (a) Total number of accidents

(See explanatory note) : (i) Fatal ..... (i) Non-Fatal ..... (b) Accidents in which workers returned to work during the year to which this return relates : (i) Accidents (workers injured) occurring during the year in which injured workers returned to work during the same year. (aa) Number of accidents ..... (bb) Mandays lost ..... (ii) Accidents (workers injured) occurring in the previous year in which injured workers returned to work during the year to which return relates (aa) Number of accidents ..... (bb) Mandays lost ..... (c) Accidents (workers injured) occurring during the year in which injured workers did not return to the work during the year to which this return relates (aa) Number of accidents (bb) ... Mandays lost ...  
..... Suggestion Scheme

## 25. (a) Is a Suggestion Scheme in operation. in the factory? .....

(b) If so, the number of suggestion: (i) Received during the year ..... (ii) Accepted during the year ..... (c) Amount awarded in cash prizes during the year: (i) Total amount awarded ..... (ii) Value of the maximum cash prize awarded ..... (iii) Value of minimum cash prize awarded ..... Certified that the information furnished above is, to the best of my knowledge and belief, correct. Date : ..... Signature of the Manager This Return should be Sent to the Chief Inspector of Factories by 31st January of the Succeeding Year Explanatory Notes: - The average number of workers employed daily should be calculated by dividing the aggregate number of attendances on working days (that is, mandays worked) by the number of working days in the year. In reckoning attendance, attendance by temporary as well as permanent employees should be counted, and all employees (including apprentices) should be included, whether they are employed directly or under contractors. Attendance on separate shifts (e.g. night and day shifts) should be counted separately. Days on which the factory was closed for whatever cause, and days on which the manufacturing processes were not carried on should not be treated as working days. However, if more than 50% of workers employed (on the previous day) attend to repair, maintenance or other such work on closed days, such day should be treated as working days. Partial attendance for less than half a shift on a working day should be ignored, while attendance for half a shift or more on such day should be treated as full attendance.

**2. For seasonal factories, the average number of workers employed during the working season and the off season should be given separately. Similarly the number of days worked and average number of manhours worked per week during the working and off season should be given separately.**

**3. The average number of hours worked per week means the total actual hours worked by all workers during the year excluding the rest intervals but including overtime work divided by the product of average number of workers employed daily in the factory during the year and 52. In case the factory has not worked for the whole year, the number of weeks during which the factory worked should be used in place of the figure 52.**

**4. Every person killed or injured should be treated as one separate accident. If in one occurrence, six persons were injured or killed it should be counted as six accidents.**

**5. In item 24 (a) the number of accidents which took place during the year should be given. In case of non-fatal accident, only those accident, which prevented workers from working for 48 hours or more, immediately following the accident should be indicated..**

[Form 23 [As amended by The West Bengal Factories (Amendment) Rules, 1991.][See Clause (2) of Rule 103]Half-Yearly Return Under the West Bengal Factories RulesPeriod ending 30th June  
.....Registration No. \_\_\_\_\_ Classification Code No.  
\_\_\_\_\_ Name of Factory :Name of Occupier:Name of Manager:

**1. District** \_\_\_\_\_

**2. Postal Address**

\_\_\_\_\_

**3. Nature of Industry**

\_\_\_\_\_

**4. Number of days worked during the half-year ending 30th June, 19** \_\_\_\_\_

**5. Number of man-days worked during the half-year ending 30th June,19**

\_\_\_\_\_

Adults-Men \_\_\_\_\_ Women \_\_\_\_\_ Adolescents-Male  
\_\_\_\_\_ Female \_\_\_\_\_ Children Boys \_\_\_\_\_ Girls  
\_\_\_\_\_

## 6. \*Average number of workers employed daily :

Adults-Men \_\_\_\_\_ Women \_\_\_\_\_ Adolescents-Male  
 \_\_\_\_\_ Female \_\_\_\_\_ Children Boys \_\_\_\_\_ Girls  
 \_\_\_\_\_

Certified that the information furnished above is, to the best of my knowledge and belief, correct. Signature of Manager \_\_\_\_\_ Date \_\_\_\_\_ The Return should be sent to the Chief Inspector of Factories by 15th July of the current year.\*The average daily number should be calculated by dividing the aggregate number of attendances on working days by the number of working days during the half-year. In reckoning attendances, attendance by temporary as well as permanent employees should be counted and all employees (including apprentices) should be counted and all employees should be included whether they are employed directly or under contractors. Attendance on separate shifts (e.g. night and day shifts) should be counted separately. Days on which the factory was closed for whatever cause, and days on which the manufacturing processes were not carried on, should not be treated as working days. However, if more than 50% of workers employed (on the previous day) attend to repair, maintenance or other such work on closed days, such days should be treated as working days. Partial attendance for less than half a shift of working day should be neglected and attendance for half a shift or more should be treated as full attendance.[Form No. 23A [Added by Notification No. 340 L.WJL.W./IR-4/85 dated 9th April, 1986](See Rule 103)Quarterly ReturnPeriod beginning first of January/April/July/October, 19 .....

### 1. Name of Factory:

### 2. Postal Address:

### 3. Nature of Industry:

### 4. Name of Occupier:

### 5. Name of Manager :

### 6. Particulars of toxic/hazardous chemicals store, used and handled and chemicals produced and stores.

Name of chemicals    Quantity

- (i)
- (ii)
- (iii)
- (iv)
- (v)
- etc.

## 7. New chemical added to the list shown against item 6 above, during the quarter

Name of chemicals    Quantity

(i)

(ii)

(iii)

(iv)

(v)

etc.

## 8. Short details' of preventive measures provided and maintained in the plant/workplace for safety of workers and for preventing pollution of environment

Date ..... 19 ..... Signature of Manager [Form No. 24  
[Substituted By the West Bengal Factories (Amendment) Rules, 1991.][See rule 106] Register of  
Accidents and Dangerous Occurrences Name of Occupier (or factory)/Employer :  
Address of factory/premises : \_\_\_\_\_

Sr.No.	Date & Time of notice		Details of injured person		Address	Sex	Age	Ins'ce No.	S
	Date	Time	Name						
	1	2	3		4	5	6	7	8
Details of accident/dangerous occurrence	Details of person submitting notice								
	Date	Time	Place	Nature of injury/damages	How occurred	Name	Designation	Signature with date	
	11	12	13	14	15	16	17	18	
Particulars of witness	Details of absence								
Name	Designation	Address	No. of days notified	Supplementary Notice	Actual no. of days of absence	Date of return to work			

				Date	Time	
19	20	21	22	23	24	25

Form 25(See rules 63 and 94)Certificate of fitness for employment in hazardous processes and operations(To be issued by Factory Medical Officer)

**1. Serial number in the register of adult workers :**

**2. Name of person examined :**

**3. Father's Name :**

**4. Sex:**

**5. Residence:**

**6. Date of birth, if available:**

**7. Name & Address of the factory :**

**8. The worker is employed/proposed to be employed in :**

(a)Hazardous process:(b)Dangerous operation:I certify that I have personally examined the above named person identification marks

are\_\_\_\_\_ and who is desirous of being employed in above mentioned process/operation and that his her age, as nearly as can be ascertained from my examination, is \_\_\_\_\_years.In my opinion he/she is fit for employment in the said manufacturing process / operation.In my opinion he/she is unfit for employment in the said manufacturing process/operation for the reasons \_\_\_\_\_ He/She is, referred for further examination to the Certifying Surgeon

\_\_\_\_\_  
Signature of the Factory Medical Officer

:Signature or left hand thumb impression of person examined :Stamp of Factory Medical Officer with name of the factoryThe serial number of the previous certificate is \_\_\_\_\_Signature or left hand thumb impression of person examined.Date :Signature of Certifying Surgeon :

I certify that I examined the person mentioned above on (date of examination)	(I extend this certificate until (If certificate is not extended, the period for which the worker is considered unfit for work is to be mentioned)	Signs and symptoms observed during examinations	Signature of the certifying surgeon
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Note: To be issued by the Certifying Surgeon and a copy to be maintained in a bound book or in a life.Form No. 26[See clause (6) of rule 103]Annual Return - CanteenYear ending 31st December, 19

.....

Industry	Name of Factory	No. of workers ordinarily employed	Type of canteen	No. of workers patronising canteen ordinarily	Whether issues are below cost price, if so, state items provided below cost price	Items of expenditure borne by employer, if any (details regarding items and amount subsidized should be given)	General remarks			
Providing cooked food and refreshments etc	Providing cooked food only	Providing refreshments and tea only	Providing tea only							
(A)	(B)	(C)	(D)							
1	2	3	4	5	6	7	8	9	10	11

Form No. 27[See Clause (7) of rule 103]Annual Return-CrècheYear ending 31st December, 19 .....

**1. Industry** .....**2. Name of Factory** .....**3. Number of women workers ordinarily employed**

.....

**4. Average daily attendance of children at the crèche**

.....

(a) 2 years and below .....(b) Above 2 years .....

**5. Details of facilities provided with regard to**(a) Milk .....(b) Food .....(c) Clothes .....(d) Toys .....  
.....(e) Medical aid .....(f) Others .....

## 6. Details of Staff employed .....

(i)Doctors .....(a)Males .....(b)Females .....(ii)Nurses  
.....(iii)Teachers .....(iv)Ayahs .....(v)Sweepers  
.....

## 7. General Remarks .....

Dated .....Signature of ManagerForm No. 28(See Clause (8) of rule 1031Annual  
Return-shelters, Rest-Rooms and Lunch RoomsYear ending 31st December, 19 .....

### 1. Industry .....

### 2. Name of Factory .....

### 3. Number of women workers ordinarily employed

.....

### 4. Average daily attendance of workers at the shelter, rest-room or lunch-room.....

### 5. Details of facilities provided with regard to drinking water .....

### 6. Details of accommodation, furniture and other equipment provided

.....

### 7. General details

.....

Dated .....Signature of Manager.....[Form No. 29 [Inserted by West Bengal  
Factories (Amendment) Rules, 1991][See Sub-rule (1) of rule 2A]Form of Application for grant of  
Certificate of Competency to a person under sub-rule (1) of Rule 2A

#### 1. Name

#### 2. Date of Birth

#### 3. Name of the Organisation

(if not self-employed)



#### **4. Designation**

#### **5. Educational Qualification**

(copies of testimonials to be attached)

#### **6. Details of professional experience**

(in chronological order)

Name of the Organisation	Period of service	Designation	Area of responsibility
--------------------------	-------------------	-------------	------------------------

#### **7. Membership, if any, of professional bodies :**

#### **8. (i) Details of facilities (examination, testing, etc.) at his disposal.**

(ii) Arrangements for calibrating and maintaining the accuracy of these facilities :

#### **9. Purpose for which competency certificate is sought (section or sections of the Act should be stated).**

#### **10. Whether the applicant has been declared as a competent person under any statute. (if so, the details) :**

#### **11. Any other relevant information :**

#### **12. Declaration by the applicant**

I ..... hereby declare that the information furnished above is true. I undertake -(a)that in the even of change in the facilities at my disposal (either addition or deletion) or my leaving the aforesaid organization, I will promptly inform the Chief Inspector;(b)to maintain the facilities in good working order, calibrated periodically as per manufacturers' instructions or as per National Standard; and(c)to fulfill and abide by the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to time.

Place & Date  
Signature of the Applicant  
Declaration by the Institution (if employed) I, \_\_\_\_\_ certify that Shri \_\_\_\_\_ whose details are furnished above, is in our employment and nominate him on behalf of the organization for the purposes of being declared as a competent person under the Act. I also undertake that I will \_\_\_\_\_ (a)notify the Chief Inspector in case the competent person leaves our employment;(b)provide and maintain in good order all facilities at his disposal as mentioned above;(c)notify the Chief Inspector any change in the facilities (either addition or deletion).

Signature \_\_\_\_\_ Designation \_\_\_\_\_ Telephone No. \_\_\_\_\_  
Official Seal. \_\_\_\_\_ Date : [Form No. 29A [Inserted by West Bengal

Factories (Amendment) Rules, 1991.][See Sub-rule (2) of rule 2A]Form of application for grant of Certificate of Competency to an Institution under sub-rule(2) of rule 2A.

**1. Name and full address of the Organisation**

**2. Organisation's status (specify whether Government.**

Autonomous, Co-operative, Corporate of Private)

**3. Purpose of which Competency Certificate is sought (specify Section (s) of the Act.)**

**4. Whether the Organisation has been declared as a competent person under this or any other statute. If so, give details.**

**5. Particulars of persons employed and possessing qualification and experience as set out in Scheduled annexed to sub-rule (1) of rule 2A.**

Sl.No.	Name and Designation	Qualifications	Experience	Section(s) and the rules under which competencyis sought for
--------	----------------------	----------------	------------	--

1.2.

**6. Details of facilities (relevant to item 3 above and arrangements made for their maintenance and period of calibration.**

**7. Any other relevant information.**

**8. Declaration :**

I \_\_\_\_\_ hereby, on behalf of \_\_\_\_\_ certify that the details furnished above are correct to the best of my knowledge. I undertake to -(i)maintain the facilities in good working order, calibrated periodically as per manufacturers' instructions or as per National Standards : and(ii)to fulfill and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to time.Place & DateSignature of Head of the Institution or of the person authorized to sign on his behalf.[Form No. 29B [Inserted by West Bengal Factories (Amendment) Rules, 1991][See sub-rule (3) of rule 2A]Form of Certificate of competency, issued to a person or an institution in pursuance of rule 2A made under Section 2 (ca) read with section 112 of the Act.I \_\_\_\_\_ in exercise of the powers conferred on me under section 2 (ca) of the Act and the rules made thereunder, hereby recognise \_\_\_\_\_ (Name of the institution) of Shri \_\_\_\_\_ aged \_\_\_\_\_ employed.(Name of the person)purpose of carrying out tests, examinations, inspections and certification for such builders, dangerous machinery, lifts and hoists, lifting machines and lifting tackles, pressure plants, confined

space, ventilation system and process or plant and equipment, as the case may be, used in victory under the Act - and the rules made thereunder. This certificate is valid from \_\_\_\_\_ to \_\_\_\_\_. This certificate is issued subject to the conditions stipulated hereunder : (i) Tests, examinations and inspections shall be carried out in accordance with the provisions of the Act and the rules made thereunder : (ii) Tests, examination and inspections shall be carried out under direct supervision of the competent person or by a person so authorized by an institution recognized to be a competent person; (iii) The certificate of competency issued in favour of a person shall stand cancelled if the person leaves the organisation mentioned in his application; (iv) The institution recognised as a competent person shall keep the Chief Inspector informed of the names, designations and qualifications of the persons authorised by it to carry out test, examinations and inspections. (v) \_\_\_\_\_ (vi) \_\_\_\_\_

Official Seal Signature of the Chief Inspector Date Note : - A separate certificate should be issued under such relevant section. A person or an institution may be recognised as competent for the purpose of more than one section of the Act. [Form No. 30] [Inserted by The West Bengal Factories (Amendment) Rules, 1991.] [See rule 13B(2)] Register containing particulars of monitoring of working environment required under section 7-A(2)(e) of the Act.

### 1. Name of the Department/Plant:

### 2. Raw materials, by products and finished products involved in the process :

### 3. Particulars of sampling :

Sl. No.	Location Operation monitored	Identified Contaminant	Date & time of monitoring	Sampling instrument used	Airborne Contamination	TWA Concentration (as given in second schedule	Reference Method	Number at t bein
No. of Samples	Range	Average	continuous exposure	short term exposure				
1	2	3	4	5	6	7	8	9

Form No. 31 [See rule 63A] Form of Application to the Site Appraisal Committee

### 1. Name and address of the applicant

### 2. Site ownership Data

(1) Revenue details of site such as Survey No. Plot No. .... etc. (2) Whether the site is classified as forest and if so, whether approval of the Central Government under section 5 of the Indian Forests Act, 1927 has been taken. (3) Whether the proposed site attracts the provisions of section 3(2) (v) of the Environment Protection Act, 1986, if so, the nature of the restrictions. (4) Local authority under whose jurisdiction the site is located.

### **3. Site Plan**

(1) Site Plan with clear identification of boundaries and total area proposed to be occupied and showing the following details nearby the proposed site. (a) Historical monument, if any, in the vicinity. (b) Names of neighbouring manufacturing units and human habitats, educational and training institution, petrol installation, storages of LPG and other hazardous substances in the vicinity and their distances from the proposed unit. (c) Water sources (rivers, streams, canals, dams, water filtration plants, etc.) in the vicinity. (d) Nearest hospitals, fire-stations, civil defence stations and police stations and their distances. (e) High tension electrical transmission lines, pipelines for water, oil, gas or sewerage; railway lines, roads, stations, jetties and other similar installations. (2) Details of soil conditions and depth at which hard strata obtained. (3) Contour map of the area showing nearby hillocks and difference in levels. (4) Plot plan of the factory showing the entry and exit points, roads, within, water drains, etc.

### **4. Project Report**

(1) A summary of the salient features of the Project. (2) Status of the organization (Government, semi government, public or private, etc.). (3) Maximum number of person likely to be working in the factory. (4) Maximum amount of power and water requirements and source of their supply. (5) Block diagram of the buildings and installations, in the proposed supply. (6) Details of housing colony, hospitals, school and other infrastructural facilities proposed.

### **5. Organisation structure of the proposed manufacturing unit/factory.**

(1) Organisation diagrams of-Proposed enterprise in general. Health, Safety and Environment Protection, departments and their linkage to operation and technical departments. (2) Proposed Health and Safety Policy. (3) Area allocated for treatment of wastes and effluent. (4) Percentage outlay on safety, health and environment protection measures.

### **6. Meteorological data relating to the site**

(i) Average, minimum and maximum Temperature Humidity Wind velocities during the previous years. (2) Seasonal variations of wind direction. (3) Highest water level reached during the floods in the area recorded so far. (4) Lightning and seismic data of area.

### **7. Communication Links**

(1) Availability of telephone/telex/wireless and other communication facilities for outside communication. (2) Internal communication facilities proposed.

## **8. Manufacturing Process Information.**

(1)Process flow diagram(2)Brief write up on process and technology.(3)Critical process parameters such as pressure build up, temperature rise and run-away reactions.(4)Other external effects critical to the process having safety implications, such as ingress of moisture or water, contact with incompatible substances, sudden power failure.(5)Highlights of the build-in safety/pollution control devices or measures/incorporated in the manufacturing technology.

## **9. Information of hazardous materials.**

(1)Raw materials, intermediates, products and by-products and their quantities (Enclose Material Safety Data sheet in respect of each hazardous substances).(2)Main and intermediate storage proposed for raw material/intermediates/ products/by-products (maximum quantities to be stores at any time).(3)Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.(4)Safety measures proposed for-handling or materials;internal and external transportation; anddisposal (packing and forwarding of finished products).

## **10. Information on Disposal/disposal of Wastes and Pollutants.**

(1)Major pollutants (gas, liquid, solid) their characteristics and quantities (average and at peak loads).(2)Quality and Quantity of solid wastes generated, method of their treatment and disposal.(3)Air, water and soil pollution problems anticipated and the proposed measures to control the same, including treatment and disposal of effluents.

## **11. Process Hazards Information**

(1)Enclose a copy of the report on environmental impact assessment.(2)Enclose a copy of the report on Risk Assessment study.(3)Published (open or classified) reports, if any, on accident situations/occupational health hazards or similar plants elsewhere (within or outside the country).

## **12. Information of proposed Safety-and Occupational Health Measures.**

(1)Details of fire fighting facilities and minimum quantity of water, CO<sub>2</sub> and or other fire fighting measures needed to meet the emergencies. (2)Detail of in-house medical facilities proposed.

## **13. Information on Emergency Preparedness.**

(1)Onsite emergency plan.(2)Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.

## 14. Any other relevant information.

I certify that the information furnished above is correct to the best of my knowledge and nothing of Importance has been cancelled while furnishing it. Name and signature of the applicant. [Form 32 [Inserted by the West Bengal Factories (Amendment) Rules, 1991][See Rule 63D] Material Safety Date Sheet

### 1. Chemical Identit

Chemical Name	Chemical Classification		
Synonyms	Trade Name		
Formula	C.A.S. No.	U.N. No.	
Regulated Incntification	Shipping Name Codes/Label	Hazchem No.:	
Hazardous Waste I.D. No.			
Hazardous Ingredients	C.A.S. No.	Hazardous	Ingredients C.A.S. No.
1.	3.		
2.	4.		

### 2. Physical and Chemical Data

Boiling Range/Point	°C	Physical State	Appearance
Melting/Freezing Point	°C	Vapour Pressure At 35°C	Odour mm Hg.
Vapour density (Air = 1)	Solubility in water at 30°C	Others	
Specific Gravity	11		
Water = 1	H		

### 3. Fire and Explosion Hazard Data

Flammability	Yes/No	LEL	% Flash Point°C	Autoignition °C Temperature
TDG Flammability	UEL	% Flash Point °C		
Explosion	Explosion			
Sensitivity to Impact	SensitivityTo Static Electricity	HazardousCombustionProducts		
Hazardous Polymerisation				
Combustible Liquid	Explosive Material	Corrosive Material		
Flammable Material	Oxidiser	Others		
Pyrophoric Material	Organic Peroxide			

## 4. Reactivity Data

Chemical Stability

Incompatibility With other Material

Reactivity

Hazardous Reaction Products

## 5. Health Hazard Data

Routes of Entry

Effects of Exposure/Symptoms

Emergency Treatment

TLV (ACGIH)	ppm	mg/m <sup>3</sup>	STEL	ppm	mg/m <sup>3</sup>
Permissible Exposure Limit LD <sub>50</sub>	ppm	mg/m <sup>3</sup>	Odour Threshold LD <sub>50</sub>	ppm	mg/m <sup>3</sup>
NPTA Hazard Signals	Health	Flammability	Stability	Special	

## 6. Preventive Measures

Personnel Protective Equipment

Handling and Storage Precautions

## 7. Emergency and First Aid Measure

Fire	Fire Extinguisher
Fire	Special Procedures
Usual Hazards	
Exposure	First Aid Measures
Antidotes/Dosages	
Spills	Steps to be taken
Waste Disposal Method	

## 8. Additional Information/References

## 9. Manufactures/Suppliers Data

	Contact Person in Emergency
Name of Firm	Local Bodies involve

Mailing Address            Standard packing  
Telephone/Telex Nos.   Tremcard Details/Ref.  
Telegraphic Address    Other

**10. Disclaimer - Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or result to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.**

By order of the GovernorSd/- S.C. RayDeputy Secretary to the Govt. of West Bengal[Substituted by West Bengal Factories (Amendment) Rules, 1991.][Substituted by West Bengal Factories (Amendment) Rules, 1991][Substituted by the West Bengal Factories (Amendment) Rules, 1991][Substituted by the West Bengal Factories (Amendment) Rules, 1991][Inserted by the West Bengal Factories (Amendment) Rules, 1991][Para 7 & 8, Substituted by the West Bengal Factories (Amendment) Rules, 1991][Inserted by ibid.][Substituted by the West Bengal Factories (Amendment) Rules, 1991][Para 7 & 8 Substituted by the West BengalFactories (Amendment) Rules, 1991.][Para 7 & 8 Inserted by the W. B. Factories (Amendment) Rules, 1991.][Substituted by the West Bengal Factories (Amendment) Rules, 1991.]