Bihar Factories Rules, 1950

JHARKHAND
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Bihar Factories Rules, 1950Published vide Notification No. B/F1-106/50-L-7802, dated the 30th November, 1950Last Updated 17th March, 2020No. B/F1-106/50-L-7802, dated the 30th November, 1950. - In exercise of the powers conferred by the Factories Act, 1948 (LXIII of 1948), the Governor of Bihar is pleased to make the following rules, the same having been previously published as required under Section 115 of the said Act: -

Chapter I
Preliminary

1. Short title, extent and commencement.

(1)These rules may be cited as the "Bihar Factories Rules, 1950".(2)These rules shall extend to the whole of the State of Bihar.(3)Save as otherwise expressly provided elsewhere, these rules shall come into force at once.

2. Definitions.

- In these rules, unless there is anything repugnant in the subject or context :-(a)"Act" means the Factories Act, 1948.(b)"Appendix" means an appendix appended to these rules.(c)"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 openings at times when the temperature of the room is 80 degree or more, shall not be deemed to be artificial humidification.(d)"Belt" includes any driving strap or rope.(e)"Degrees" (of temperature) means degrees on the Fahrenheit scale.(f)"Examining Surgeon" means a qualified medical practitioner authorised by a Certifying Surgeon under sub-section (2) of Section 10 of the Act to exercise any of the powers of such Certifying Surgeon

under the Act.(g)"Forum" means a forum appended to these rules.(h)"Fume" includes gas or vapour.(i)"Health Officer" means the Municipal Health Officer or District Health Officer or such other official as may be appointed by the State Government in that behalf.(j)"Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards constructions and maintenance.(k)"Inspector" means an officer appointed under Section 8 of the Act and includes "Chief Inspector".(l)"Maintained" means maintained in an efficient state, in efficient working order and in good repair.(m)"Manager" means the person responsible to the occupier for the working of the Factory for the purposes of the Act.(n)"Section" means section of the Act.(o)"Schedule" means a schedule appended to these rules.(p)"Qualified medical practitioner" means a person holding a qualification granted by an Authority specified in the schedule to the Indian Medical Degrees Act, 1916 (VII of 1916) or in the Schedules to the Indian Medical Council Act, 1956 (102 of 1956).

2A. [Procedure of grant of Certificate of Competency. [Inserted by Notification no. /F1-103/88 L & E 17 dated 9.2.1998.]

(1)The Chief Inspector may recognise any person as "competent person" within such area and for such period as may be specified for the purposes of carrying out tests, examinations, inspections and certification for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined space, ventilation system and such other process or plant and equipment as stipulated in the Act and the Rules made thereunder, located in a factory, if such person possess the qualifications, experiences and other requirements as set out in the schedule annexed to this Rule:]Provided that the Chief Inspector may relax the requirements of qualifications in respect of a competent person, if such a person is exceptionally experienced and knowledgeable, but not the requirements in respect of the facilities at his command:Provided further that the competent person recognised under this provision shall not be above the age of 62 and shall be physically fit for the purpose of carrying out the tests, examination and inspection.(2)The Chief Inspector may recognise an institution of repute, having person possessing qualifications and experience as set out in the schedule annexed to sub-rule (1) for the purposes of carrying out tests, examinations inspections and certifications for buildings, dangerous machinery, hoists and lifts, lifting machine, and lifting tackles, pressure plant, confined space ventilation system and such other process or plant and equipment as stipulated in the Act and the Rules made thereunder, as a competent person within such area and for such period as may be specified(3)The Chief Inspector on receipt of an application in the prescribed form from a person or an institution intending to be recognised as a 'competent person' for the purposes of this Act and the Rules made thereunder, shall register such application and after satisfying himself as regards competence and facilities available at the disposal of the applicant may recognise the applicant as a 'competent person'. Such application shall be disposed of either by issuing a certificate of competency in the prescribed form or by rejecting the same specifying reasons therefor within a period of 60 days.(4)The Chief Inspector, if he has reason to believe that 'competent person':-(a)has violated any condition stipulated in the certificate of competency;(b)has carried out a test, examination and inspection or has acted in manner inconsistent with the intent or the purpose of this Act or the Rules made thereunder, or has omitted to act as required under the Act or Rules made thereunder;(c)for any other reason to be recorded in writing; may revoke the certificate of competency after giving an

opportunity to the 'competent person' for being heard.Explanation.-For the purpose of this Rule, an institution includes an organisation.(5)The Chief Inspector may, for reasons to be recorded in writing, require re-certification of lifting machines, lifting tackles, pressure plant or ventilation system, as the case may be, which has been certified by a competent person outside the State.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 ofResponsibility

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 (specify Section or Sections of the Act)

10. Whether the applicant has been declared as a competent person under any other statute (If so, furnish details)

11. Any other relevant information

DeclarationI hereby declare that the information furnished above is true, I undertake-(a)that in the event of any change in the facilities at my disposal (either addition or deletion) or my leaving the aforesaid organisation, 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 Standards; and(c)to fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to timeTo be filled in by the institution (if employed)I certify that Sri.....whose details are furnished above, is in our employment and nominate him on behalf of the organisation 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 of Application for grant of Certificate of competency to any Institution under sub-rule (2) of rule 2A

1. Name & full address of the organisation

2. Organisation's status

(Specify whether Government, Autonomous, Co-operative, Corporate or Private)

3. Purpose for 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 Schedule annexed to sub-rule (1) of rule 2A.

Sl. No.	Name and Designation	Qualification	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 calibration periodically.

7. Any other relevant information.

DeclarationI,.....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 fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the Chief Inspector from time to time;Signature of Head of the Institution or the persons authorised to sign on his behalf.Place and DateDesignation.Form of Certificate of Competency issued to a person or an institution in pursuance to Rule 2A.I.....in exercise of the powers conferred on me under Section 2(ca) of the Factories Act and Rules made thereunder, hereby recognise.....(name of the institution)or Shri.....(name of the person) employed on.....(name of the organisation)to be a competent person for the purpose of carrying out tests, examinations, inspections and certifications for such buildings, dangerous machinery, lifts and hoist, lifting machines and lifting tackles, pressure plants, confined space, ventilation system and

such other process or plant and equipment, as the case may be, used in a factory located in.....under Section and the Rules made thereunder.This certificate is valid from to This certificate is issued subject to the conditions stipulated hereunder.....(i)The tests, examinations and inspections shall be carried out in accordance with the provisions of the Act and the rules made thereunder;(ii)The tests, examinations and inspections shall be carried out under the direct supervision of the competent person or by a person so authorised by an institution recognised to be a competent person;(iii)The certificate (of competency shall stand cancelled if the person declared competent leaves the organisation mentioned in his application;(iv)The institution recognised as competent person shall keep the Chief Inspector informed of the names, designation and qualifications of the person authorised by it to carry out test, examinations and inspections.(v).....(vi).....Station Official Seal.....Date:Signature of the Chief Inspector.

Schedule

Sl. no.	Section or Rules under which command, competencyis recognised	Qualification required	Experience for the purpose	Facilities at his Command
1	2	3	4	5
1.	Rules made under Section 6 and Section 112-certificate ofstability for buildings.	6 Degree in Civil or Structural Engineering or equivalent.	(i) A minimum of 10 yearsexperience in the design or construction of testing or repairs ofstructures;(ii) Knowledge of non-destructivetesting, various codes of practices that are current and theeffect of the vibrations and natural forces on the stability ofthe building, and(iii) Ability to arrive at a reliable conclusion with regardto the safety of the structure or the building.	
2.	Rules made under Section 21 (2)- 'Dangerous Machines.'	Degree in Electrical or Mechanical or Textile Engineering orequivalent.	(i) minimum of 7 years experiencein-(a) the design or operation ofmaintenance, or(b) the testing, examination andinspection of relevant machinery, their guards, safety devicesand appliance.(ii) He shall-(a) be	Causes for measurement, Instrument for measurement of speedand any other equipment or device to determine the safety in theuse of the

			conversant with the safetydevices and their proper functioning;(b) be able to identify defects andany other cause leading to the failure; and(c) have ability to arrive at reliable conclusion with regardto the proper functioning of the safety device and appliance andthe Machine guard.	dangerous machines.
3.	Section 28-Lifts and Hoists.	A degree in Electrical and/or Mechanical Engineering or itsequivalent.	(i) A minimum experience of 7 yearsin-(a) design or erection ormaintenance; or(b) inspection and test procedureof lifts and hoists.(ii) He shall be-(a) Conversant with relevant codesof practices and test procedures that are current;(b) conversant with other statutoryrequirements covering the safety of Hoists and Lifts;(c) able to identify in the defects and arrive at a reliableconclusion with regard to the safety of the Hoists and Lifts.	Facilities for lead testing tonsile testing, gaugesequipments/gadgets for measurement and any other equipmentrequired for determining the safe working conditions of theHoists and Lifts.
4.	Section 29-Lifting Machinery and Lifting Tackles.	Degree in Mechanical or Electrical Metallurgical Engineeringor its equivalent.	(i) A minimum experience of 7 yearsin-(a) design or erection ormaintenance; or(b) testing, examination andinspection of lifting machinery, chains, ropes and liftingtackles.(ii) He shall be-(a) Conversant with relevant codesof practices and test procedures that are current;(b) conversant with fracturemachines and metallurgy of the material of construction;(c) conversant with heattreatment/stress relieving techniques as	Facilities for lead testing tonsile testing, heat treatment,equipment/ gadget for measurement, gauges and such otherequipment to determine the safe working conditions of the liftingmachinery tackles.

			applicable to stressbearing components and parts of lifting machinery and liftingtackles;(d) capable of identifying detects and arriving at reliableconclusion with regard to the safety of the lifting machinery,chains, ropes and lifting tackles.	
5.	Section 31-Pressure Plant	Degree in Chemical or Electrical or Mechanical Engineering orits equivalent.	(1) A minimum experience of 10years in-(a) design or erection ormaintenance or(b) Testing, examination andinspection or pressure plants.(ii) He shall be-(a) conversant with the relevantcodes of practices and test procedures relating to pressurevessels;(b) conversant with other statutoryrequirements concerning the safety of unfired pressure vesselsand equipment operating under pressure;(c) conversant with the destructivetesting techniques as are applicable to pressure vessels;(d) able to identify the defects and arrive at a reliableconclusion with regard to the safety of the pressure plant.	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.
6.	(i) Section 36-precautions against dangerous fumes.	Master's degree in Chemistry, or a degree in the ChemicalEngineering.	(i) A minimum of 7 years experiencein collection, analysis of environmental samples and calibrationof monitoring equipment;(ii) He shall-(a) be conversant with thehazardous properties of chemical and their permissible limitvalues;(b) be	

			conversant with the currenttechnique as of a sampling and analysis of the environmentalcontaminants; and(c) be able to arrive at a reliableconclusion as regards the safety in respect of entering andcarrying out hot work.(i) A minimum of 7 years experiencein the design fabrication, installation, testing of ventilationsystem 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 practiceand tests procedures that are current in respect of ventilationand a traction system for fumes and shall be able to arrive at areliable conclusion with regard to effectiveness of the system.
7.	Ventilation systems as required under various schedules framedunder Section 87, such as schedules on-	Degree in chemical or electrical or Mechanical Engineering orits equivalent.	
(i)	Grinding or glazing of metals and process incidental thereto;		
(ii)	Cleaning or smoothing, roughening, etc. of articles, by a		

jetsand, metal shot, or grit, or other abrasive propelled by a blastof compressed air or steam.

(iii) Handling and processing of Asbestos.

(iv) Manufacturing of Rayon by viscost process.

(v) Foundary operations.

3. Approval of plans.

- [(1) No site shall be used for the location of a factory or no building shall be constructed, re-constructed, extended or taken into use as a factory or a part of a factory unless an application in Form no.1 along with the documents and plan as prescribed in sub-rule (2) has been submitted to, and the plans submitted have been approved by the Chief Inspector of Factories and previous permission in writing in respect thereof has been obtained, subject, however, to the provisions of sub-section (2) of Section 6.] [Substituted by G.S.R. 82, dated 27.11.1978.](2)The application mentioned in sub-rule (i) shall be in Form no. 1 and shall be accompanied by the following documents, namely :-(a)A flow diagram or chart of the manufacturing process to be carried on in the factory or in the part of factory.(b)A brief description of all the manufacturing processes and work proposed to be carried on in the factory or in the part of the factory, and(c)The following plans and drawing each in triplicate, drawn to scale :-(i)site plan of the factory showing its surrounding including other buildings, structures, open land, roads, streams of rivers adjacent or close to the site,(ii)lay out-plan of the factory and its premises,(iii)plans elevations, and all necessary cross-sections of all the buildings, indicating relevant details including those relating to natural lighting, ventilation and means of escape in case of fire and showing clearly the position of the plant, machinery, aisles, passageways and gun-ways.(3)The Chief-Inspector of Factories, may approve the plan submitted in accordance with sub-rule (2) subject to such conditions as he may specify in writing and where any conditions are specified, the plan shall be deemed to have been approved only when the said conditions are fulfilled :Provided that the Chief Inspector may, if on account of practical difficulties, is so satisfied, dispense with the details relating to the position of the plant, machinery, aisles, passage-ways and gun-ways from the plan.(4)The Chief Inspector may require the applicant to furnish such other documents, informations and practicals as may be lacking or as he may consider necessary for the purpose of examination and approval of the plans.(5)The Chief Inspector shall communicate his decision to the applicant in writing and in case any plan is approved the Chief Inspector shall return one copy of each of the approved plans along with the conditions, if any, imposed by him, and with such remarks as he may consider necessary.

3A. [Certificate of Stability. [Inserted by S.O. 688, dated 18.7.1988.]

- No manufacturing process shall be carried on in any building of a factory constructed, reconstructed or extended, or in any building which has been taken into use as a factory or part of a factory until a certificate of stability in respect of the building in Form no. 34 has been sent by the occupier or manager of the factory to the Chief Inspector, and accepted by him.]

4. Registration and grant of licence.

(1)Subject to the provisions of rule 5, no manufacturing process shall be started or carried on in any factory unless a licence in respect thereof has been granted by the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1995.] and the same is valid for the time being.Explanation-The permission granted by the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1995.] under sub-rule (i) of rule 5 shall be deemed to be a licence and shall remain valid until-(a)the licence is granted,(b)the permission granted is withdrawn for having been failed to fulfil the conditions specified therein or any other reason,(c)the period, if any, for which the permission has been granted expires, or(d)the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1995.] communicates in writing the reason for not granting the licence.(2)The occupier of a factory shall submit to the Chief Inspector an application in Form 2 in triplicate for the registration of the factory and grant of licence.

5. Grant of Licence.

- [(1) An application for a licence to work a factory shall be made in Form no.2 and shall be submitted in triplicate to the Inspector of Factories of the area concerned who after making such enquiries as he may deem fit for satisfying himself, about the correctness of the particulars and on payment of fees specified in schedules A, B, C and D may register the factory in a register to be kept in his office for the purpose and grant a licence for the factory in Form IV on such terms and conditions as may be specified with the approval of the Chief Inspector of Factories. Pending grant of such licence the Inspector of Factories of the area concerned may grant permission to start to carry on work in the factory subject to such conditions as he may specify in writing:Provided that in every such case of grant of licence or permission to start or carry on work in the factory, the State Government may call for the relevant documents from the Chief Inspector of Factories or the Inspector of Factories of the area concerned and review the decision taken in the case and subject to provisions of Section 107, wherever such review is made State Government's decision in the matter shall be final] [Substituted by S.O. 1093 dated 30.10.1995.](2)[Every licence granted or renewed under this chapter shall remain valid or be in force for a minimum period of ten year to maximum period of fifteen years as applicable. The licence so granted or renewed shall remain valid upto 31st December of the applied period:Provided that the fee prescribed under Schedule 'A' 'B' and 'C' is deposited for the period of application:Provided further that in case of temporary factory or the nature of their activity demands for the Chief Inspector may issue factory licence for less than ten year validity on an application made in this behalf by an occupier.] [Substituted by Notification No. S.O. 60, dated 24.6.2019.](3)The licence or a copy thereof [x x x x] [Omitted by S.O. 1093 dated 30.10.1995.] shall be exhibited at a conspicuous place in the factory near the main entrance, and a

signboard with the licence number allotted to the factory in bold letters shall be displayed at the main entrance:Provided that the signboard shall not be smaller in size than 12" x 9" and the letters thereon not less than 2" in height. The letters on the signboard shall be arranged as follows :-F.A.No...

6. Amendment of licence.

(1)A licence may be amended by the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1995.] with the approval of the State Government.(2)When there is any increase in the number of workers employed or in the rated capacity of the machinery and plants installed in terms of HP. or K.W. installed, resulting in an increase in the amounts of fee payable for the licence as compared to the fee already paid or when there is any other change requiring amendment in the licence already granted or renewed, the occupier of the factory shall, within 15 days of the increase or change as the case may be, submit an application to the [Inspector of Factories] [Substituted by S.O. 1093, dated 30.10.1985.] for amendment of the licence, stating therein the nature of amendment required and the reasons therefore.(3)The fee for the amendment of licence shall be [one hundred] [Substituted by S.O. 113, dated 22.5.1992.] rupees:Provided that when the amendment is required due to the increase in the number of workers or in the rated capacity of the machinery and plants installed the fee for amendment of licence shall be one hundred rupees plus the amount by which the fee that would have been payable if the licence had originally been issued in the amended from exceeds the fee originally paid for the licence.(4)The licence already granted shall cease to remain valid after the change or increase in the number of the workers or in the installed capacity as aforesaid unless the occupier has filed an application and paid the required fee as laid down in these rules within fifteen days from the said date of change or increase.(5)[Every such application for amendment of a licence will be forwarded by the Inspector of Factories concerned through of Chief Inspector of Factories to the State Government for approval before the licence is amended.] [Inserted by S.O. 1093, dated 30.10.1985.]

7. Renewal of licence.

- [(1) An application for renewal of licence shall also be in Form no.2 and shall be submitted in triplicate to the Inspector of Factories of the area concerned not later than the date on which the licence expires and if the application is so made the factory, shall be deemed to be duly licenced until such date as on which the Inspector of Factories renews the licence on which the Inspector of Factories communicates in writing the reasons for not renewing the licence.] [Substituted by S.O. 1093, dated 30.10.1985.](2)The fee for the renewal of the licence shall be the same as that for grant thereof:[If the application for renewal of licence is not received within fifteen days after the expiry of the licence the fee payable for licence renewal application shall be fifty percent more in addition to the fee prescribed in schedules (A), (B) and (C) for three months and after three months fee for renewal of licence will be cent-percent more in addition to the fees prescribed in schedules (A), (B) and (C).] [Substituted by S.O. 113, dated 22.5.1992.](3)[A licence may be renewed by the Inspector of Factories with the approval of the Chief Inspector of Factories :] [Substituted by S.O. 1093, dated 30.10.1985.]Provided that the State Government may call for the relevant documents from the Chief Inspector of Factories or the Inspector of Factories of the area concerned and review the decision

taken in the case and subject to the provisions of Section 107, wherever such review is made the State Government's decision in the matter will be final.(4)The Chief Inspector may condone the additional fee prescribed in the proviso to sub-rule (2), in case he is satisfied that the delay in submission of application for renewal of licence was due to any reason beyond the control of the occupier or due to any other reason of similar nature.

8. Transfer of licence.

(1)When there is any change of the occupier of factory before the expiry of the licence the new occupier shall within 15 days of the transfer, apply to the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1985.] of the area concerned for transfer of licence in his name:Provided that in the case of the death or insolvency of an occupier, the person succeeding or taking over the factory and functioning as the occupier shall apply for transfer and for amendment of the licence for the remaining period as soon as practicable, but in no case later than one month after the death or taking over:[Provided further that no such transfer of a licence will be made by the Inspector without obtaining prior approval of the Chief Inspector.] [Inserted by S.O. 1093 dated 30.10.1985.](2)The application for transfer shall be accompanied by a letter from the previous occupier or some other documentary evidence which may prove that the occupation of the factory has been transferred to the applicant.(3)The fee for transfer of licence shall be [one hundred rupees] [Substituted by S.O. 118 dated 22.5.1992] and shall be payable by the new occupier applying for transfer of licence under sub-rule (1).

9. Loss of licence.

- When a licence granted under these rules is lost or destroyed, a duplicate may be granted on payment of a fee of [Rs. Twenty five.] [Substituted by S.O. 118 dated 22.5.1992]

10. Payment of fees.

(1)Every application under these rules shall be accompanied by the Treasury Challan showing that the appropriate fee has been deposited in one of the treasuries in the State of Bihar under the head of account "087-Labour and Employment-Fees realised under the Factories Act":Provided that when the head of account under which the licence fees have to be deposited is changed, the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1985.] may direct the occupiers to deposit the fees payable under these rules under such head of account as he may specify.(2)The fee or any portion of the fee paid may be refunded to the applicant by the [Inspector of Factories] [Substituted by S.O. 1093 dated 30.10.1985.] of the area concerned as refund of revenue if an application for grant, renewal, amendment or transfer of a licence is rejected or if for any other reason fee or portion of the fee so paid, is considered by the [Inspector of the area concerned] [Substituted by S.O. 1093 dated 30.10.1985.] as not payable.

11.

It shall be the duty of the occupier to submit to the [Inspector of Factories, of the area concerned] [Substituted by S.O. 1093 dated 30.10.1985.] application for registration and grant of licence or for renewal of licence or for transfer or amendment of the licence as may be necessary within the time prescribed in the foregoing rules.

12. Notice of occupation.

- The notice of occupation shall be in Form no. 2.

12A. Notice of change of manager.

- The notice of change of manager shall be in Form no. 3.

12B. [Guidelines, Instructions and Records. [Inserted by Notification. no. 2/F1 -103/88 L & E 47 dated 9.2.93.]

(1)Without prejudice to the general respectability of the occupier to comply with the provisions of Section 7(A), 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 to work in the factory.(2)The occupier shall maintain such records, as may be prescribed by the Chief Inspector, in respect of monitor or working environment in the factory.]

Chapter II
Inspectors and Certifying Surgeons

13. Powers of Inspectors.

(1)An Inspector shall, for the purpose of giving effect to the provisions of the Act, have powers to do all or any of the following things, that is to say :-(a)to photograph any worker; to inspect, examine, measure, copy, photograph, sketch or test, as the case may be, any building or room, any plant, machinery, appliance or apparatus, any register or document, or anything provided for the purpose of securing the health, safety or welfare of the workers employed in a factory;(b)in the case of an Inspector who is a duly qualified medical practitioner, to carry out such medical examinations, as may be, necessary for the purposes of his duties under the Act;(c)to file a complaint in Court against the manager or the occupier of a factory or against both or against any other person liable to be punished under the Act and to prosecute, conduct or defend before a court any complaint or other proceeding arising under the Act or in discharge of his duties as an Inspector;(d)to satisfy himself at each inspection that-(i)The provisions of the Act and of these rules regarding the health and safety of the workers employed in the factory are observed;(ii)the adolescents and children employed in the factory have been granted certificate of fitness and that no adolescent or child is employed who

is obviously unfit;(iii)the register of all workers employed in such factory, of their hours of work and the nature of their employment, is in the prescribed form;(iv)the periods of rest and the holidays provided by the Act are granted, and that the limits of hours of work laid down therein are not exceeded;(v)the provisions of Section 59 and of the rules relating to the payment of overtime are duly observed; and(vi)the notices required by Sections 61 and 72 and the abstracts required by Section 108 are duly affixed and that the registers required by these rules are properly maintained.(e)to enquire into and investigate the cause of any accident or disease, or the possibility of any accident or disease;(f)to note how far the defects pointed out at a previous inspection have been removed and how far orders previously issued have been complied with;(g)to point out all such illegalities, defects or irregularities as he may observe during the course of his inspection and to forward a copy of the inspection note to the manager or occupier of a factory for removal of the illegalities, defects or irregularities;(h)to seize any record or document for the purpose of examination and satisfying himself that the provisions of the Act and the rules thereunder were complied with or which he may consider relevant in respect of any offence under the Act which he may have reasons to believe or suspect has been committed by the occupier or the manager;(i)to direct by an order in writing the occupier or the manager to produce either personally or through his agent any prescribed record or register at his office or at any other place where he may be temporarily camping or at any other convenient place; and(j)to direct by an order in writing the manager or the occupier or any other employee of a factory to appear before him personally at his office, or at the place where he may be temporarily camping or at any other place, to be examined and interrogated by him on any matter connected with the compliance of the provisions of the Act or the Rules.(2)The Inspector shall keep a file of the records of his inspection in Form no. 28.(3)Every order passed under the Act and these rules, shall be served on the manager of a factory-(a)by delivering a copy of it to him personally or at his office, or(b)by registered post.

13A. Qualifications of an Inspector.

- No person shall be appointed as an Inspector for the purposes of the Act, unless he possesses the qualifications hereunder-(a)he must not be less than 22 years or more than 35 years of age:Provided that in the case of a candidate belonging to Scheduled Castes or Scheduled Tribes, the upper age limit shall be 40 years;(b)he must have secured a degree or diploma, equivalent to a degree of a recognised University in any branch of Engineering, Technology or Medicine;(c)the Government may, in addition to the basic qualifications, by order, specify appropriate additional qualifications, if any, for a particular post:Provided that in the case of a person who has been working as an Inspector under the Act at the time of commencement of this rule, the Government may, subject to such conditions as it may specify, exempt such person from the provisions of this rule.

14. Duties of Certifying Surgeon.

(1)For the purpose of the examination and certification of young persons who wish to obtain certificate 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)(a)Every Certifying Surgeon shall keep bound books containing certificates in Form no.5 respectively in foil and counterfoil. In

each book the form shall be numbered consecutively and shall be printed on cloth-backed paper. The foil and counterfoil shall be filled in and the left thumb mark of the person or his signature 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, the Certifying Surgeon shall sign the foil and initial the counterfoil and shall deliver the foil to the person in whose name the certificate is granted. The foil so delivered shall be the certificate of fitness granted under Section 69. All counterfoils in a book shall be preserved by the Certifying Surgeon for a period of at least two years after the issue of the last certificate in that book.(b)A Certifying Surgeon revoking a certificate under sub-section (4) of Section 69 shall write the word "Revoked" in red ink on the foil and counterfoil.(3)Any authority granted by a Certifying Surgeon under sub-section (2) of Section 10 to a qualified medical practitioner (hereinafter referred to as the Examining Surgeon) to exercise the powers of the Certifying Surgeon under the Act shall be made in writing and shall state the factories or area to which the jurisdiction of the Examining Surgeon is limited, and any cancellation of such authority shall be made by the Certifying Surgeon in writing.(4)An examining Surgeon shall grant and revoke certificate in the manner provided in sub-rule (2). The word "Provisional" shall be printed or stamped in red ink at the top of each foil and counterfoil.(5)(a)A person who loses a certificate of fitness which has been granted to him may apply to the Surgeon who granted it for a copy of the certificate and the said Surgeon after making such enquiry from such person's employer (or if such person is unemployed, from his last employer) and from such other sources, as he deems fit, may grant a duplicate of the lost certificate. The word "Duplicate" shall be clearly written in red ink across such duplicate certificate and initialled by the said Surgeon. The counterfoil in the bound book of forms shall be similarly marked "Duplicate" and initialled.(b)For every copy of a duplicate certificate granted under clause (a), a fee of fifty Naye Paise shall be charged, which shall be credited to Government. The Certifying Surgeon or Examining Surgeon shall maintain a register in Form no. 26 of all fees paid for the issue of duplicate certificates and shall initial each entry therein.(c)No duplicate of certificate shall be granted to any person otherwise than in accordance with the provisions of this sub-rule.(6)(a)The Certifying Surgeon shall visit every factory within the local limits for which he is appointed in which adolescents or children are known to be employed, atleast once in three months. At each of these visits the manager shall produce before him all adolescents and children employed in the factory, whether actually at work or not.(b)The Certifying Surgeon shall personally examine every adolescent and child who is in possession of a "Provisional" certificate granted under sub-rule (4) and shall, if satisfied that a certificate of fitness should be granted, destroy the provisional certificate and issue his own certificate of fitness in place of it.(c)If on such examination the Certifying Surgeon is of opinion that a person in possession of a child's provisional certificate of fitness is under the age of fourteen years or is not fit for employment as a child in a factory, or that a person in possession of an adult's provisional certificate of fitness is less than 15 years of age or is unfit to work as an adult, he shall impound the certificate, write on it the word "Cancelled" and sign the same and shall forward the certificate with such remarks, if any, as he may offer to the Inspector of Factories for information, and inform the Examining Surgeon who granted such provisional certificate.(7)If the Certifying Surgeon refuses to grant any person a certificate of fitness, or if he cancels a "Provisional Certificate" of fitness, no fresh application for a certificate for such person shall be entertained until after the lapse of three months from the date of such refusal, unless the Certifying Surgeon otherwise gives permission in writing at the time of refusing to grant the certificate or at the time of cancelling a 'Provisional Certificate':Provided that

this sub-rule shall not prevent the immediate granting of a certificate of fitness as a child to a person whose certificate of fitness as an adult has been revoked under clause (c) of sub-rule (6), if in the opinion of the Certifying Surgeon such person is of age and fit to work in a factory as a child.(8)The Certifying Surgeon or the Examining Surgeon, as the case may be, at his periodical visits shall satisfy himself as to the fitness of all the adolescents and children employed in the factory and shall revoke the certificate of fitness of any whom he deems to be unfit.(9)The Certifying Surgeon and the Examining Surgeon shall hand over to the manager a note in Form no. 27 detailing the result of each visit to the factory.(10)The Certifying Surgeon shall, upon request by the Chief Inspector or an 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 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.(11)For the purpose of the examination of persons employed in processes covered by the rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the rules relating to such dangerous operations.(12)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 (Form no. 16) which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit.(13)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 that process for 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.(14)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.(15)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.(16)[Any register or record of medical examination and tests therewith required to be carried out under any of the schedule, annexed to rule 95 in respect of any worker shall be kept available and shall be preserved till the expiry of one year after the worker ceases to be in employment of the factory.] [Inserted by S.O. 686 dated 13.7.1988.]

14A. Fees for Certifying Surgeon for examination of young persons.

(1)The Certifying Surgeon shall be entitled to the following fees for examination and grant of certificate of fitness under sub-section (2) of Section 69:-(i)Rs. 4 (Rupees four) for first young person and Re. 1 (Rupee one) for every subsequent person examined in a single day in a factory for the purpose of such examination;(ii)Rs. 2 (Rupees two) for the first young person and Re. 1 (Rupee one) for every subsequent young person examined on a single day when the person to be examined go to the Certifying Surgeon for the purpose of such examination;(iii)If a Certifying Surgeon has to

travel beyond a radius of five miles from his dispensary or place of posting to examine any young person or persons, he shall be entitled to an additional fee at the rate of thirty seven Naya Paise only per mile for the total distance travelled by him. A Certifying Surgeon who is the servant of the State Government shall charge this additional fee from the occupier of a factory only if he does not charge any travelling allowance for the journey from the State Government.(2)The Certifying Surgeon shall send his bill of fees direct to the occupier of the factory in which the young persons are examined or are to be employed.(3)For the purpose of his duties, as specified in sub-rule 6 of rule 14, a Certifying Surgeon shall be entitled to the same rate of fee for examination and grant of certificates of fitness and the same rate of additional fee for travelling as specified in sub-rule (1) of this rule.(4)The fees and additional fees prescribed in this rule shall be paid by the occupier of the factory concerned.(5)The fees and additional fees for the renewal of certificate of fitness shall be the same as prescribed in these rules for grant of certificate of fitness.(6)An Examining Surgeon shall be entitled to the same fees and additional fees as prescribed for a Certifying Surgeon.

14B. Fees for Certifying Surgeon for carrying on examination under sub-rule (10) of Rule 14.

- A Certifying Surgeon shall be paid by the occupier of the factory besides the additional fees for travelling, a daily professional fee at the rate of Rs. 16 per day irrespective of the number of persons examined but this fee shall be reduced to Rs. 8 if the examination does not take more than half of a day:Provided that if the number of factories visited exceeds four on a single day, the professional fee payable above shall be raised to Rs. 24 per day.

14C. Fees for Medical Practitioners.

(1)On receipt of a report under subsection (2) of Section 89 from a Medical Practitioner and after getting the report confirmed by a certificate of a Certifying Surgeon or otherwise, the Chief Inspector shall pay a fee of Rs. 4 (Rupees four) only to the Medical Practitioner concerned for each person suffering from any disease specified in the Schedule to the Act.(2)The Chief Inspector shall send a written demand to the occupier of the factory concerned by registered post under acknowledgement due for the amount paid by him under sub-rule (1).(3)On receipt of such demand the occupier of the factory concerned shall within a fortnight deposit the amount into the nearest Treasury or Sub-Treasury by means of a Challan under the head ["087-Employment-Labour and Fees realised under the Factories Act",] [Substituted by S.O. 281, dated 18.2.1977.] and shall immediately send the challan in original by Registered Post to the Chief Inspector in compliance with the notice of demand.(4)If any occupier fails to deposit the amount demanded by the Chief Inspector within a fortnight of the receipt of the notice of demand the Chief Inspector shall take steps to recover the amount as an arrear of Land Revenue from the occupier of the Factory concerned.

14D. Fees for examination of persons employed in dangerous operations.

- The fees and additional fees for examination for persons employed in dangerous operations as specified in rule 95 shall be the same as prescribed in rule 14-A, and shall be payable by the occupier

of the factory in which the persons examined are employed.

14E. Debiting of fee payable by the Chief Inspector under rule 14-C.

- The fees payable by the Chief Inspector under rule 14-C shall be debited to the head ["281-Labour and Employment-Labour working condition and safety Inspector of Factories.] [Substituted by S.O. 281, dated 18.2.1977.]

14F. Arrear of fees and additional fees to be recovered from the occupier as arrears of land revenue.

- If the occupier of any factory fails to pay the fees or additional fees, or both, prescribed under rules 14-A, 14-B and 14-D to any Certifying Surgeon, the same shall, on an application received from the Certifying Surgeon by the Chief Inspector, be recoverable as an arrear of land revenue from the occupier of the factory concerned and paid to the Certifying Surgeon concerned.

Chapter III
Health

15. Record of white washing, etc.

- The record of dates on which whitewashing, colour-washing, varnishing, etc. are carried out shall be entered in a register maintained in Form no.7.

16. Disposal of wastes, and effluents.

(1)In this rule, unless there be anything repugnant in the subject or context, the word "Stream" shall include any river, stream, water course, inland water tank, reservoir, or the like, whether natural or artificial, and "wastes" unless specifically mentioned shall include "effluents" whether solid, liquid or gaseous.(2)Such effluents as may be harmless and as do not need any treatment to make them harmless shall be separated from other effluents and shall be carried in separate drains:Provided that if the quantity of such effluents is very small, the Chief Inspector may permit all the effluents to be carried in one drain.(3)All wastes unless they are harmless shall be cleaned, treated and purified effectively by such electrical, mechanical, chemical or other means by a combination of any of these, as may be appropriate considering the nature and quality of the waste, so as to make the waste innocuous and harmless.(4)The waste shall be purified to such a degree and shall be disposed of in such a manner as may not pollute any stream or atmosphere or may not cause any damage or harm to any fish, animal or plant life or may not cause any injury to the health of, or be a source of nuisance to the inhabitants of the area in the vicinity of the factory or in the area over or through which the wastes may spread or pass.(5)Efficient drains shall be provided for the effluents from the point of origin to the place of treatment and the place of disposal.The drains shall be of such capacity as to be adequate for draining out the entire effluents without allowing them to over-flow

and shall be constructed of masonry, concrete, or bricks and cement and shall be covered unless iron or concrete pipes are used for carrying the effluents:Provided that the Chief Inspector may, by an order in writing, relax the requirements of this sub-rule to such extent and subject to such conditions as he may specify, if he is satisfied that compliance with the provision thereof is not necessary or practicable.(6)Wastes which are gaseous or a mixture of gases and solids shall be removed by means of a mechanical exhaust system or by such other means as may be effective and practicable and the system of exhaust shall be of adequate capacity and the wastes removed shall be disposed of in such manner as to ensure that they do not escape in any work-room or that they do not spread and cause nuisance in the vicinity of the factory.Where the gaseous wastes contain solid particles in such quantity as may create nuisance in the locality, effective arrangements shall be made to separate solid materials from the gaseous wastes before allowing the gaseous wastes to escape in the atmosphere and effective arrangement shall be made for the collection and disposal of the collected solid wastes:Provided that the provisions of this sub-rule shall not apply to a factory which is already in existence on the date on which these amendments cams into force but in case of such factories the Chief Inspector may direct the occupier and the manager of the factory to take such steps and to make such arrangements to prevent or minimise the nuisance as may be practicable :Provided further that the Chief Inspector may relax the requirements of this rule to such extent and subject to such conditions as he may specify in writing if he is satisfied that compliance with the provisions of this sub-rule is not practicable or necessary in consideration of the capacity of the factory or the degree of nuisance created thereby.(7)Solid wastes shall not be allowed to spread in any workroom or in any part of the factory. Such wastes shall be collected in suitable receptacle at convenient places and arrangements shall be made for the disposal of such wastes at frequent intervals.(8)In case of a factory which comes into existence after this rule comes into effect, no manufacturing process shall be started in the factory unless complete details, as specified in sub-rules (9) and (10) of the arrangements for the treatment and the disposal of the wastes and effluents have been submitted to and approved by the Chief Inspector and unless arrangement as approved have been made :Provided that in case of factories which are already in existence on the date on which this rule comes into force, the above mentioned details shall be submitted to the Chief Inspector within three months and the arrangements as approved shall be made within six months of the date of approval. The Chief Inspector may, however, extend these period up to six months and 12 months respectively :Provided further that the approval of the Chief Inspector mentioned in this sub-rule shall not be necessary in the following circumstances :-(a)Where the drainage system of the factories is connected to the public sewerage system or where the wastes of the factory are proposed to be discharged into the public sewerage. In the case of such a factory, complete details and particulars in respect of the proposed arrangements for the treatment and disposal of the wastes shall be submitted to the authority under whose control the public sewerage functions and no manufacturing process shall be started in the factory and the wastes shall not be discharged into the public sewerage system unless the arrangements have been approved by the said authority, and where the approval has been given by the said authority an attested copy of the letter of approval along with the details of the arrangements shall be submitted to the Chief Inspector within one month of the date of approval.(b)When the arrangement and scheme for the treatment and disposal of the wastes of the factory have been approved by the Director of Health Services.In the case of such a factory, an attested copy of the letter of approval with complete details of the arrangements and the scheme for the treatment and disposal of wastes shall be submitted to the Chief Inspector

within one month of the date of approval and no manufacturing process shall be started in the factory unless the approval of the Director of Health Services has been obtained and unless arrangements as approved have been made.(9)The following details and particulars in respect of the arrangements for treatment and disposal of wastes shall be submitted to the Chief Inspector for approval:-(a)Three copies of the layout plan of the factory showing the point of origin and the place of discharge or disposal of the wastes and the layout and arrangements of drains and other devices for carrying and disposal of the wastes from, the point of origin to the point of disposal or discharge.(b)Three copies of the site plan of the factory along with its environs showing the alignment of drains or channels for carrying the wastes as well as showing the area or through which the wastes are likely to spread or pass.In the site plan, the villages, residential areas, agricultural fields, etc., through or over which the wastes and the effluents may pass shall be clearly indicated.(c)Nature and description of different wastes produced in the factory.(d)The quantity of each of the wastes produced per day.(e)The chemical composition of the waste, chemical analysis and B.O.D. value on the liquid wastes.(f)The maximum quantity of the wastes required to be treated and disposal of any one day.(g)The maximum temperature of the wastes at the place where it is to be disposed of.(h)Where the wastes are to be discharged in a stream, the lowest rate of flow of the stream, in case it is a flowing stream, and size and capacity of the stream otherwise.(i)Three copies of the plans showing complete details of the treatment plant, or the arrangements for the treatment of wastes.(j)Three copies of the detailed description of the entire arrangement for treatment and disposal of wastes.(10)The Chief Inspector or an Inspector may require such other details, particulars or informations to be furnished as he may consider necessary in order to be able to examine the scheme for treatment and disposal of the wastes.(11)On receipt of complete details as prescribed above, the Chief Inspector may approve the arrangements with such conditions as he may specify in writing.(12)If the Chief Inspector finds that any arrangement which was approved was not effective he may direct the occupier and the Manager to re-examine and modify the arrangement in such a manner, to such an extent and within such a period as he may specify in writing.

17. 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 stream during any period when the dry bulb temperature of that room exceeds 85 degrees;(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 reading 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:-

Schedule 2

Dry. bulb.	Wet bulb.	Dry bulb.	Wet bulb.	Dry bulb.	Wet bulb.
1	2	3	4	5	6
60.0	58.0	77.0	75.0	94.0	85.0
61.0	59.0	78.0	76.0	95.0	87.0

62.0	60.0	79.0	77.0	96.0	87.5
63.0	61.0	80.0	78.0	97.0	88.0
64.0	62.0	81.0	79.0	98.0	88.5
65.0	63.0	82.0	80.0	99.0	89.0
66.0	64.0	83.0	80.5	100.0	89.5
67.0	65.0	84.0	81.0	101.0	90.0
68.0	66.0	85.0	82.0	102.0	90.0
69.0	67.0	86.0	82.5	103.0	90.5
70.0	68.0	87.0	83.0	104.0	90.5
71.0	68.0	88.0	83.5	105.0	91.0
72.0	70.0	89.0	84.0	106.0	91.0
73.0	71.0	90.0	84.5	107.0	91.5
74.0	72.0	91.0	85.0	108.0	91.5
75.0	73.0	92.0	85.5	109.0	92.0
76.0	74.0	93.0	86.0	110.0	92.0

Provided, however, the 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 this shade is less than 3.5 degrees.

18. General Ventilation.

(1)In every room in a factory in which workers are ordinarily employed and which is not ventilated by mechanical means, there shall be sufficient openings in the walls or roof for the admission or egress of air to maintain the atmosphere in the room in a fresh and reasonably cool condition.(2)If in any part of a factory the Inspector, having due regard to the weather conditions than prevailing, considers the atmosphere to be unduly vitiated or stagnant and that this is due to insufficient openings, he shall by written order require the manager to-(a)increase the openings in the walls or in the roof to an aggregate area equal to 75 per cent of the area found by the applicable formula in Appendix I or to such less extent as he deems reasonable in the circumstances, or(b)provide mechanical means to produce a continuous change of air at the rate of three complete changes in the hour or at such rate as he deems sufficient in the circumstances.

19. Measures required for cooling.

- If in any room of a factory the cooling properties of the air appear to the Chief Inspector to be at times insufficient to secure workers against injury to health or serious discomfort he may by written order require the manager to carry out any or all the following measures before a specified date.(a)Electric or other fans to be used to produce adequate movement of air over the workers. The Chief Inspector may require such movement to be such that the rate of cooling by evaporation at a height of five feet from the floor level, as found by the use of a kata thermometer, is two and a half times what it would be if the air were not moved by such fans;(b)The height of the room from floor

to roof or ceiling to be increased to a height of 16 feet or such less height as the Chief Inspector deems reasonable in the circumstances:Provided that where any process generating heat is carried on in a building, the Chief Inspector may, by an order in writing, require the height of the roof to be raised to eighteen feet.(c)A layer of tiles, wood or other substance which is bad conductor of heat to be added to the roof or substituted for other materials or a ceiling or a double roof to be provided,(b)Sun shades of specified size to be placed before or fitted to such openings as admit direct sunlight upon the workers.

20. Ventilation and temperature in new factories or rooms.

- In any factory or part of a factory which has been built or brought into use after the enforcement of these rules, no worker shall be allowed to work unless-(a)if no mechanical means for general ventilation and for reduction of temperature is employed, and(i)the width of the room exceeds 18 meters (59 ft.) or its floor area exceeds 560 sq. meters (6,128 sq. feet), the aggregate area of ventilating openings as approved or directed by the Chief Inspector:(ii)the width of the room does not exceed 18 meters or its floor area does not exceed 560 sq. meters, the aggregate area of ventilating openings is not less than the area found from the applicable formula in Appendix I :Provided that the Chief Inspector in consideration of the special circumstances of a factory, may permit smaller ventilating openings to be provided:Provided further that for computing the aggregate area of ventilating openings no account shall be taken of doors (except doors without shutters), ventilators or sky-lights.(b)If ventilating openings in any room or building are not adequate mechanical ventilation is provided and fans or other means employed for this purpose are of such capacity as to circulate through the room or the building six times in every hour a volume of air equal to the cubic capacity of the room or building, and(c)The internal height of the roof or the ceiling of any room or shed at the lowest point is not less than 14 feet from the floor level:Provided that the Chief Inspector may allow a lower height of any roof, if-(i)the roof includes sufficient layer of earthen ware, tiles, woods compressed asbestos or any other substance which is a bad conductor or heat; or(ii)it is a double roof with an air space not less than six inches in depth open to the atmosphere at the seves and in case of slopping roofs with sufficient means of egress of hot foul air at the adex; or(iii)a ceiling with sufficient air-space has been provided under the roof; or(iv)the room is air conditioned or other efficient arrangements have been made to keep the temperature of the room within reasonable limits; or(v)the room has re-inforced concrete or other kind of terraced roof; or(vi)on account of the climatic or other conditions or the size of the factory the Chief Inspector considers that a height of 14 feet is not necessary or practicable:Provided further that the Chief Inspector may require the internal height to be increased up to 20 feet, if any process generating heat is carried on within the room or shed.

21. Provision of Hygrometer.

- In all department's of cotton spinning and weaving mills wherein artificial humidification is adopted, hygrometers shall be provided and maintained in such position as are approved by the Inspector. The number of hygrometers shall be regulated according to the following scale :-(a)Weaving Department.-one hygrometer for departments with less than 500 looms and one additional hygrometer for every 500 or part of 500 looms in excess of 500.(b)Other

Department.-One hygrometer for each room of less than 3,00,000 cubic feet capacity and one extra hygrometer for each 2,00,000 cubic feet 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 a position approved by the Inspector, for taking hygrometer shade readings.

22. Exemption from maintenance of hygrometers.

- When the Inspector is satisfied that the limits of humidity allowed by the Schedule to rule 17 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 17 to be affixed near every hygrometer.

- A legible copy of the Schedule to rule 17 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 temperature shall be recorded thrice daily during each working day. 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 in the prescribed Form no. 6 maintained in the factory at the end of the each month, the persons who have taken the readings shall sign the register and certify the correctness of the entries. The Register shall always be available for inspection by the Inspector.

25. Specifications of hygrometer.

(1)Each hygrometer shall comprise two mercurial thermometers of wet bulb and dry bulb of similar construction and equal in dimensions, 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 dropping into the water in the reservoir. The muslim covering and the wick shall be suitable for the purpose, clean and free from size of grease.(3)No part of the wet bulb shall be within 3 inches from the dry bulbs or less than 1 inch 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 2 feet.(6)Each thermometer shall be graduate so that accurate readings may be taken between 50 and 120 degrees.(7)Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines on the steam, each fifth and tenth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree, i.e., 50, 60, 70, 80,

90, 100, 110 and 120.(8)The markings as above shall be accurate that is to say, at no temperature between 50 and 120 degrees shall be 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 National Physical Laboratory, New Delhi, or any other Laboratory, Institution or Competent authority approved by the Chief Inspector in writing and such certificate shall always be kept attached to the Humidity Register.

26. Thermometer to be maintained in efficient order.

- 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 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 of distilled water or pure rain water in any particular mill or mills is 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 a 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 affixed to a wall, pillar or other surface unless protected therefrom by wood or other non-conducting,material at least half an inch in thickness and distant at least one inch from the bulb of each thermometer.(2)No hygrometer shall be affixed at a height of more than 5 feet 6 inches 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 the 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 two inches and in the case of pipes installed after 1st day of January, 1951 the diameter shall not exceed one inch.(b)Such pipe 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 half an inch in thickness.(d)No uncovered jet from such pipe shall project more than 4½ inches beyond the outer surface of any cover.(e)The steam pressure shall be as low as practicable and shall not exceed 70 Lbs. per square inch.(f)The pipe employed for the introduction of steam into the air in a department shall be effectively covered with such non-conducting material, as may be approved by the Inspector in order to minimise the amount of heat radiated by them into the department.

31. General lighting in factories.

- Without any prejudice to the provisions of rules 32 to 35, adequate and suitable lighting, whether natural or artificial, shall be provided and maintained in every part of a factory including yards and open spaces where any person may be employed or may have to pass through:Provided that if in the opinion of an Inspector, lighting of a better standard or of a better or different quality is required in a factory or in any part of a factory he may direct the manager or the occupier, by an order in writing to take such measures as he may consider necessary, and the direction so given shall be carried out within the time specified in the order, if any.

32. 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 3 feet candle measured in the horizontal plane at a level of 3 feet above the floor:Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 25 feet 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 I foot candle and where work is actually being done the illumination shall not be less than 3 feet candles.(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 0-5 foot candles at floor level.(3)The standard specified in this rule shall be without prejudice to the provisions of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

33. Prevention of glare.

(1)Where any source of artificial light in the factory is less than 16 feet above floor level, no part of the light source or of the lighting fitting having a brightness greater than 10 candles per square inch shall be visible to persons whilst normally employed within 100 feet 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 exceed 20°.(2)Any local light, that is to say, an artificial light designed to illuminate particularly the area or part of the area of work of a single objective 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 person employed at a normal working place, or shall be so placed that no such person is exposed to glare therefrom.

34. 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 to 33 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 extent and subject to such conditions as he may specify.

35. Exemption from Rule 3.

- Nothing in rule 32 shall apply to the parts of factories respectively specified in part I of the Schedule annexed hereto.(2)Nothing in sub-rule (1) of rule 32 shall apply to the factories or parts of factories respectively specified in Part II of the said Schedule.

Schedule 3

Part I – Parts of factories in which light sensitive photographic materials are made or used in an exposed condition.

Part II – Cement work

Works for the crushing and grinding of lime stoneGas worksCoke oven worksElectrical stationsFlour MillsMeetings and breweriesParts of factories in which the following process are carried on :-Concrete or artificial stone makingConversion of iron into steelSmelting of iron oreIron or steel rollingHot rolling or forgoing, tempering or annealing of metalsGlass blowing and other working in molted glassTar distillingPetroleum refining and blending

36. Quantity of drinking water.

(1)The quantity of drinking water to be provided for the workers in every factory shall be at least as many gallons a day as there are workers employed in the factory and such drinking water shall be readily available at all times during working hours.(2)Where the Chief Inspector is satisfied in respect of any particular factory that the existing arrangement of drinking water provides substantially the same facilities, he may exempt the factory from such requirement to such extent and subject to such conditions as he may specify.

37. Source of supply.

- The water provided for drinking shall be supplied(a)from a public water supply system, or(b)from any other source approved in writing by the Health Officer.

38. Means of supply.

- If drinking water is not supplied direct from taps either connected with public water supply system of the factory approved by the Health Officer, it shall be kept in suitable vessels, receptacles or tanks fitted with taps and having dust proof covers placed on raised stand or platform in shade and having suitable arrangements of drainage to carry away the split water. Such vessels, receptacles and tanks shall be kept clean and measures shall be taken to ensure that the water is free from contamination.

39. Cleanliness of well or reservoir.

(1)Drinking water shall not be supplied from any open well or reservoir unless it is so constructed, situated, protected and maintained as to be free from the possibility of pollution by chemical, or bacterial and extraneous impurities.(2)Where Drinking water is supplied from such well or reservoir the water in it shall be sterilised once a week or more frequently if the Inspector by written order so require, and the date on which sterilising is carried out shall be recorded:Provided that this requirement shall not apply to any such well or reservoir of the water therein is filtered and treated to the satisfaction of the Health Officer before it is supplied for consumption.

40. Report from Health Officer.

- The Inspector may by order in writing direct the manager to obtain at such time or at such intervals as he may direct, a report from the Health Officer as to the fitness for human consumption of the water supplied to the workers, and in every case to submit to the Inspector a copy of such report as soon as it is received from the Health Officer.

41. 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 April to the 30th 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 and shall be obtained only from a source approved in writing by the Health Officer.(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 these rules shall be called "Water Centre."(c)the water centres shall be sheltered from the weather and adequately drained.(d)the number of water centres to be provided shall be one "Centre" for every 150 persons employed at any one time in the factory:Provided that in the case of the factory where the number of persons employed exceed 500 it shall be sufficient if there is one such "Centre" as aforesaid for every 150 persons up to the first 500 and one for every 500 persons thereafter,(e)every "Water Centre" shall be maintained in a clean and orderly condition,(f)every water centre shall be in charge of a suitable person who shall distribute the water. Such person shall be provided with clean clothes while on duty.Clause (f) shall not apply to any factory in which suitable mechanically operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

42. Latrine accommodation.

- Latrine accommodation shall be provided in every factory, on the following scale :-(1)where the maximum number of workers working at any one time does not exceed one hundred there shall be at least one latrine for every twenty-five of such workers;(2)where the maximum number of workers working at any one time exceeds one hundred, there shall be one latrine for every twenty-five workers for the first hundred workers and one for every fifty thereafter.(3)where women workers are employed, separate latrine shall be provided for men and women and the number of latrines required to the provided for each shall be calculated separately on the basis of their respective numbers in the manner specified in clauses (1) and (2):Provided that in calculating the number of latrines required under the rule, any number of workers less than twenty-five or fifty, as the case may be, shall be reckoned as twenty-five or fifty.

43. Requirements to which latrines should conform.

(1)Service (bucket or pan type) latrines. - All latrines provided in factories after these amendments come into force, shall be of the sanitary (water closed or flushing) type conforming to the specifications prescribed in this rule:Provided that in a factory employing less than 250 workers and is not situated in a Municipal area, the Chief Inspector may, in writing, permit the service (bucket or pan) type of latrines, with such conditions as he may specify.(2)Sanitary (water closed or flushing type) latrines :-(i)All sanitary (water closed or flushing type) latrines shall be connected to a municipal or common water borne sewerage system or to a septic tank or shall be aqua privy latrines;(ii)Closet.-Water closets in the latrines, shall be of glazed porcelaine, be of the "Wash down type" unless otherwise specified by the inspector of Factories;(iii)Water connection-Each water closet shall possess a flushing rim and a suitable connection for one and half inches down pipe from the cistern and shall be fitted with a trap which shall consist either of glazed stoneware or cast iron;(iv)Flushing cistern.-Each water closet shall be provided with a flushing cistern of a capacity not less than three gallons and shall also be provided with a metal-pull chain and suitable handle or a metal ring.(v)Reserved tanks for cistern-Unless there is twenty-four hours piped water supply a reserve tank of proper construction and adequate capacity for supply of water to the flushing cistern shall be provided. The capacity of this tank shall be such as to provide adequate water supply to the cistern of all the latrines throughout the working hours of the factory.(vi)Septic tanks.-Latrines, other than those connected with an efficient water brone sewerage system, shall be connected with and efficient adequate septic tank alongwith other necessary accessories, including arrangements for ventilation. The septic tanks shall be cleaned at intervals of not more than one year.(3)Where service (bucket) type of latrines are provided there shall be arrangements for cleaning the buckets at least twice in every shift.(4)All drains emanating for the latrines shall be cleaned at least once in everyday and shall always be kept in a clean and sanitary conditions.(5)Properly constructed and lighted approach roads or pathways shall be provided to each latrine or block of latrines and such roads or pathways shall be regularly cleaned and maintained.

44. Accommodation in and privacy of latrines and urinals.

- Every latrine and urinal shall have adequate space in order to enable a person to sit comfortably and be of adequate height and under cover and so partitioned of as to secure privacy and shall have proper door and fastening.

45. Signboards to be displayed.

- Where workers of both sexes are employed, there shall be displayed outside each latrine and urinal or block of latrines and urinals, a notice or a signboard, permanently fixed, in the language understood by the majority of the workers, "for men only" or "for women only", as the case may be. The notice or signboard shall also bear the figure of a man or of a woman, as the case may be.

46. Urinal accommodation.

(1)Where the maximum number of workers working at any one time does not exceed five hundred there shall be at least one urinal for every fifty such workers.(a)Where the maximum number of workers working at any one time exceeds five hundred, there shall be one urinal for every fifty workers for the first five hundred and one for every hundred thereafter.(3)Where women workers are employed, separate urinals shall be provided for men and women workers and the number of urinals required to be provided shall be calculated separately on the basis of their respective numbers in the manner specified in sub-rules (1) and (2):Provided that in calculating the number of urinals required under the rule any odd number of workers less than fifty or hundred as the case may be shall be reckoned as fifty or hundred:Provided further that two feet length of urinal accommodation shall be deemed to be equivalent to one urinal.

47. Requirements to which urinals should conform.

(1)Ordinary urinals. - In factories wherein the number of workers generally employed does not exceed two hundred and fifty, ordinary common type of urinals connected to a sewer or drain may be provided.(2)Sanitary (flushing type) urinals-(a)In factories wherein the number of workers generally employed exceeds two hundred and fifty constant flushing type of urinals or any other sanitary type approved by the Chief Inspector shall be provided.(b)Construction.-Sanitary (flushing type) urinals shall have white glazed stoneware through and bluff stoneware squatting seat. The face shall be lined with white glazed tiles to a height of four feet.(c)Flushing.-Unless it is of constant flushing type the urinals shall be flushed from a tank, the capacity of which shall not be less than 3 gallons per urinal or seat, by a 1½ inch connection and down the faces by means of a galvanised iron perforated pipe.(d)Sewer connection.-Unless connected to a municipal or common sewerage system, the urinals shall be connected to septic tanks provided for sanitary latrines or provided separately for the urinals.(3)Urinals and drains connected thereto shall be maintained in a clean and sanitary condition in the same manner as prescribed for latrines.

48. Certain latrines and urinals to be connected to sewerage system.

(1)When any general system of underground sewerage with an assured water supply for any particular locality is provided in a municipality, all latrines and urinals of factory situated in such locality shall, if the factory is situated within 100 feet of an existing sewer, be connected with that sewerage system.(2)No worker shall make use of any other place within the factory as latrine or urinal, other than the latrine and the urinal accommodation provided under these rules,(3)The design and the site or situation of latrines and urinals accommodation shall be subject to the approval of the Director of Public Health and the construction shall be subject to the approval of the Chief Inspector.(4)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 rise within a workroom.

49. Whit-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 register in Form no. 7. The dates on which white-washing or colour-washing is carried out shall also be conspicuously written on the objects white-washed or colour-washed :Provided that this Rule shall not apply to latrines and urinals, the walls, ceillings or partitions of which are laid in glazed tiles or otherwise finished to provide a smooth, polished, impervious surface, and they are washed with suitable detergents and disinfectants at least once in every period of four months.

50. Construction and maintenance of drains.

- All drains carrying waste or sullage water shall be constructed in masonry or other impermeable 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 Health Officer.

51. Water taps in latrines.

(1)Where piped water supply is available a sufficient number of water taps conveniently accessible shall be provided in or near such latrine accommodation.(2)If piped water supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines.

52. Number and location of spittoons.

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

53. Type of spittoons.

- The spittoons shall be of any 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 powder;(c)any other type approved by the Chief Inspector.

54. Cleaning of spittoons.

- The spittoons mentioned in clause (a) of rule 53 shall be emptied, cleaned and disinfected at least once every day; and the spittoon mentioned in clause (b) of rule 53 shall be cleaned by scrapping out the top layer of sand as often as necessary or at least once every day.

Chapter IV
Safety

55. Further safety precautions.

- Without prejudice to the provisions of subsection (1) of Section 21 in regard to the fencing of machine, the further precautions specified in the schedules annexed hereto shall apply to the machines noted in each schedule.[Schedule I] [Substituted by S.O. 686 dated 13.7.1988.]Textile Machinery Except Machinery used in Jute Mills(1)Application.-The requirements of this schedule shall apply to machinery in factories engaged in the manufacture or processing of textiles other than Jute textiles. The schedule would not apply to machinery in factories engaged exclusively in the manufacture of synthetic fibres.(2)Definitions.-For the purposes of this schedule-(a)"Calendar" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them. Calendars may have two or more rollers, or bowls, some of which may be heated.(b)"Embossing calendar" means a calendar with two or more rollers, one of which is engraved for producing figure effects of various kinds on a fabric.(c)"Card" means a machinery 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 from may be-separated into individual relationship. The speed of the cylinders and their direction of relation may vary. The finished product is delivered as a silver. Cards include the revolving flat card, the roller and clearer card, etc.(d)"Card clothing" means the material with which the surface of the cylinder, deffer, flats etc. of a card are 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 a 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" includes a general classification of machinery including combers, 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 blades used for the purpose of cutting textiles fibres into staple lengths.(h)"Garnet machine" means any of a number of types of

machines for opening hard twisted waste of wool, cotton, silk etc.Note.-Essentially, such machines consists of a licker is one or more cylinders, each having a complement worker and stripper rolls; and a fancy roll and doffer. The action of such machine is some that like that 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.Note.-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 faster surface speed and perform a combing action.(j)"In running roll" 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 dangerous part of any machine or the machine itself while the guard, cover door or other measures provided to safeguard against danger is open or unlocked or not in position.Note.-Which will also hold the guard, cover or door closed and locked while the machine or the dangerous part is in motion, otherwise, dangerous part of any machine or the machine itself will stop or will not be set in motion.(l)"Kier" means a large metal vat, usually a pressure type in which fabrics may be boiled out, bleached, etc.(m)"Ribbon tapper" means a machine or a part of a machine used to prepare laps for feeding a cotton comb.Note.-Its purpose is to provide a uniform lap in which fibres have been straightened as much as possible.(n)"Silver tapper" means a machine or part of machine in which a number of parallel card silvers are drafted slightly, laid said 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 years 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 slay and the fabric is wound on a cloth beam.(p)"Starch mangle" means a mangle that is used specifically for starching cotton goods.Note.-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 calendar having two or more rolls used for squeezing water from fabrics before drying. Water mangles may also be used in other ways during the finishing of various fabrics.(r)"Mule" means a type of spinning frame having a head stock and carriage as its two main sections. The head stock is stationary. The carriage is move-able 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 the rolls or drums which by virtue of their positioning and movement create a nipping hazard.(t)"Openers and pickers" means a general classification of machinery which includes breaker pickers, intermediate pickets, finisher pickers, single process pickers, multiple process pickers, willow machines, card and picker waste cleaners, thread extractors, shreeding machines, roving waste openers, shoddy pickers, bale breakers feeders, vertical openers, latice cleaner, horizontal cleaners and any similar machinery equipped with either cylinders, screen section, calendar section, rolls, or beaters used for the preparation of stock for further processing.(u)"Paddler" means a trough for 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 pay cloth into folds of regular length for convenience of subsequent process or use.(w)"Roller Printing Machine" means a machine used for printing fabrics consisting of a large central cylinder, of pressure bowl, around the lower part of the perimeter of which is having a color through a furnisher roller, doctor blades, etc.(x)"Continuous bleaching ranges" means a machine for bleaching of cloth in rope or open width from with the following arrangement. The cloth, after wetting out, pass through a squeez 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 from, 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 the 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 podium hydroxide, streth it while saturated, and washing out most of the caustic before releasing tension.(z)"Sanforizing machine" means a machine consisting of a large stearnheated cylinder and endless, thick woolen felt blanket which is in cloth contact with the cylinder for most of its perimeter, and an electrically heated show which processes 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 steal blades spirally mounted on a roller. The roller relates in close contact with a fixed ledger blade. There may be from one to six such rollers, on a machine.(ab)"Singing machine" means a machine which comprises 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 hariness on yarn or cloth by burning.(ac)"Slasher" means a machine used for applying a size misture to warp yarn. Essentially, it consists of a stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming and for winding the yarn on the loom beams.(ad)"Tenter frame" means a machine for drying cloth under tension.Note.-it essentially consists of a pair of endless travelling chains fitted with clips of the fine pins and carried on tracks. The cloth is firmly held at the selvages by the two chains which diverage, as they move forward so that the cloth is brought to the desired width.(ae)"Warper" means a machine for preparing and arranging the yams 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 all such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock or an equivalent suitable positive locking device.(b)Stopping and stating handles or other controls 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, sproket wheels, and other dangerous moving parts of machinery which either form part of the machinery or are used in association with it shall be securely fenced by safe guards of substantial construction which shall be constantly maintained and kept in position while the parts of the machinery they are fencing are in motion.(4)Openers and pickers.-(a) In all openers or pickers machinery, beaters and other dangerous parts shall be securely fenced by suitable guards so as to prevent contract with them. Such guards and doers or covers of openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement:Provided that in the case of doors of opening giving access to any dangerous part, other than beater covers, instead of the interlocking arrangement, such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively

locked in position or fixed in such a manner that it cannot be a moved without the use of hand tools.(b)The feed rools on all openers and pickers 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 down. The guard or cover shall be so locked that it cannot be raised, until the machine is stopped, and the machine cannot be started until the cover or guard is closed: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 advice shall not be used unless the automatic lap forming device efficient working order.(5)Cotton 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 later requirement in respect of automatic locking device shall not apply while stripping or grinding operations are carried out:Provided further that stripping or grinding operation shall be carried out only by specially trained adult workers wearing tight fitting clothing whose names have been recorded in the register prescribed in this behalf as required in sub-section (i) of Section 22 of Factories Act, 1948.(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 to either shift the main belt to the fast pulley of the machine or to dismantle the interlocking mechanism. Such an arrangement shall be used Only for stripping or grinding operations.(6)Garnett Machine.-(a) Garnett Maker-in shall be enclosed.(b)Garnett fancy rools shall be enclosed by guards. These shall be installed in way that keeps workers 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 shall be guarded so as to prevent fingers being caught in the pins of the intersecting fallers.(b)All nips of in-running rolls shall be guarded by suitable nip guards conforming to the following specifications.Note.-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 that the fingers of any person shall not reach that point through that opening and in any circumstances, the maximum width of the opening shall not exceed the following :

Distance of opening from nip point.	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 mm.	- 22 mm.
191 to 215 mm.	- 32 mm.

(8)Silver and Ribbon tappers.-The calendar drums and the lap school shall be provided with a guard to prevent access to the nip between the in-running rolls.(9)Speed Frames.-Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement.(10)Spinning Mules.-Wheels on spinning rule carriages shall be provided with substantial wheel guards extending

to within 6 mm. of the rails.(11)Warpers.-Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters/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 1.05 and 0.53 meters high from the floor or working platforms and the gate shall be located 38 mm. from the vertical tangement 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 in clause 7 (b).(ii)When slashers are operated by control levers, these levers shall be connected to a horizontal bar or treadle located not more than 100 cm. above the floor to control the operation from any point.(iii)Slashers operated by push button contra, 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 calendar rolls are used, additional buttons shall be provided at both size of the machine, at points near the nips, except when slashers are equipped with an enclosed dryer.(b)Enclosed hot air dryer.-(i) All open nips of the top squeezing rollers shall be guarded by nip guard conforming to the requirements in clause 7(b).(ii)When slashers are operated by control levers, these 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 stop and start buttons located on both sides of the machines at intervals spaced not more than 1.83 meters on centres.(13)Looms.-Each Loom shall be equipped with suitable guards designed to minimise the danger from flying shuttles.(14)Valves of Kiers, Tanks and other Containers.-(a) Each valve controlling the flow of steam, injurious gases or liquids into a kier or any other tank or container into which a person is likely to enter in connection with a process, operation, maintenance or for any other purpose, shall be provided with suitable locking arrangement to enable the said person to lock the valve securely in the close position and retain the key with him before entering the kier, tank or container.(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 splash shall be provided to prevent danger.(15)Shearing Machine.-All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the button 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 machiners 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)Mercerizing Range (Piece Goods)-(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 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 in clause 7(b).(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 the clip opener.(19)Paddlers.-Suitable nip guards conforming to the requirement in clause 7 (b) 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 inter-locking 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 of 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 in clause 7 (b).(22)Sanforizing and palmer machine.-(a) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements in clause 7(b).(b)Access from the sides to the nips of in-running rolls should be 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 on all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator the floor or 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, Tumbler or Shaker.-(a) Each drying lumber, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an interlocking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or sheet in open, and which will also prevent the outer door on the case or sheet from being opened without shutting off the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device.(b)Each closed barrel shall also be equipped with adequate means for holdings open the doors on or covers of the inner and outer cylinder or shell while it is being loaded or unloaded.(25)Printing Machine (Holler Type).-All in-running rolls shall be guarded by nip guards conforming to the requirement in clause 7(b).(b)The engraved roller gears and the large crown wheel shall be guarded.(26)Calendars.-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)Plainting Machines.-Access to the trap between the knife and card bar shall be prevented by a suitable guard.(29)Hand Baling 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 that it will prevent the handle from travelling beyond the vertical position should the handled slip from the operators hand when the pawl has been released from the teeth of the take-up gear.(30)Flat-work Ironer.-Each flat-work or coller ironer shall be equipped with a 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 one operator or other person will 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 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 1.83 metres.

II

Cotton GinningLine Shaft.-The line shaft or second motion in cotton ginning factories, when below floor level, shall be completely enclosed by a continuous wall or unclimbable fencing with only so many openings as are necessary for access to the shaft for removing cotton seed, cleaning and oiling;

and such openings shall be provided with gates or doors which shall be kept closed and locked.

III

Wood-Working Machinery

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

(a)Wood-working machine means a circular saw, band-saw, planning machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork or any other article except metal.(b)Circular saw means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation.(c)Band saw means a band saw, the cutting portion of which runs in a vertical direction but does not include a long saw or band resawing machine.(d)Planning machine means a machine for over hand planing or for thicknessing or for both operations.

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 incharge of the machine.

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

4. Floors. - The floor surrounding every wood-working machine 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 loose materials.

5. Training and supervision. - (1) No person shall be employed at a woodworking machine unless he has been sufficiently trained to work that class of machine, or unless he works under the adequate supervision of a person who has a thorough knowledge of the working of the machine.

(2)A person who is being trained to work on a wood-working machine shall be fully and carefully instructed as to the dangers of the machine and the precautions to be observed to secure safe working of the machine.

6. 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 form an arc of a circle having a radius not exceeding the radius of the largest saw used on the bench.(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 table the distance between the front edge of the knife and the teeth of the saw shall not exceed half an inch.(iii)For a saw of a diameter of less than 24 inches, the knife shall extend upwards from the bench table to within one inch of the top of the saw, and for a saw of a diameter of 24 inches or over shall extend upwards from the bench table to a height of at least 9 inches.(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 fence. 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 the 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 table 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 6 inches apart, and shall extend from the axis of the saw outwards to a distance of not less than two inches beyond the teeth of the saw. Metal plates, if not beaded, shall be of a thickness of at least 1/10 inch, or if beaded be of a thickness of at least 1/20 inch.

7. Push sticks. - A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.

8. Band Saws. - Every band saw shall be guarded as follows ;-

(a)Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material.(b)The front of the top pulley shall be covered with sheet or expanded 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 bench table and the top guide.

9. Planing machines. - (1) A planing machine (other than a planing machine which is mechanically fed) shall not be used for overhand planing unless it is fitted with a cylindrical cutter block.

(2)Every planing machine used for overhand planing 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 a vertical and horizontal direction.(3)The feed roller of every planing machine used for thicknessing, except the combined machine for overhand planing an thicknessing, shall be provided with an efficient guard.

10. 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.

(2)The wood being moulded at a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce as far as possible the risk of accident to the worker.

11. Chain mortising Machines. - The chain of every mortising machine shall be provided with a guard which shall enclose the cutters as far as practicable.

12. 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.

13. Exemptions. - Paragraphs 6, 8, 9 and 10 shall not apply to any wood-working machine 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 the Schedule.

IV

Rubber Mills

1. Installation of machines. - Mills for breaking down cracking, granting, mixing, refining and warming rubber or rubber compounds shall be so installed that the top of the front roll is not less than 46 inches 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 guards 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-

(a)hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls; and(b)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 sixty-nine inches above the floor or working level.(3)Safety-trip rods and tight wire cables on all rubber mills shall be examined and tested daily in the presence of the Manager or other responsible persons and if any defect is disclosed by such examination and test, the mill shall not be used until such defect

has been remedied.

V

Jute Textiles

1. Fencing of machinery.-The occupier shall provide and maintain in good order fencings guards or safety device in respect of each individual machine as prescribed.

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 6' in length, measured from the centre of the first cloth roller 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 4' 6" from the floor, and extending at that height, not less than 3' 6" from the centre of the first pair of rollers; the height of the rest of the side guards shall not be less than 4' 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 ends.(ii)Provision for starting the machine at the feed end only, 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)When a machine is stopped for clearing a jam or attention otherwise the starting gear shall be secured in the "off" position at least by a lock operated by a removable key in possession of the person attending the machine.(iv)The lever operating the unbalanced weight shall be securely fenced.(d)Sheet steel casings completely enclosing the side shafts, i.e., the shafts and gears shall not be exposed on the underside. The casings shall be locked or secured by a device which will ensure (i) that they cannot be opened while the machine 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 10" 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 6" apart. Any 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 untill the cylinder has come to rest and that the machine cannot be

restarted until the doors are closed:

Provided that in the case of machines installed before the commencement of this rule rigidly secured panels filling the underframe 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 up to the centre line of the cylinder, enclosing the stripper belts and pulleys shall be provided on all machines installed after the commencement of this rule.(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 2"; the distance from the doffer pinpoints to the underside of the rods to be 4"; the space between the Drawing pressing roller and the first rod not to exceed 2"; and the width of the guard from the first to the last road to be not less than 12".(e)A hand or guard rail extending the full width of the Drawing pressing roller, fitted 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)When a machine is stopped for clearing a jam or attention otherwise, the starting gear shall be secured in the "off" position at least 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 the guards opens, and outwards as the guard closes:

Provided that in the case of machines installed before the commencement of this rule, 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 □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 inter-linked with the driving mechanism so that silver cannot be fed into the bills, 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 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 the commencement of this rule a guard securely held in position by automatic catches to prevent opening by vibration but without the inter-locking 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 machines.-(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 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 the commencement of this rule a guard securely held in position by automatic catches to prevent opening by vibration, but without the inter-locking 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 inter-connected with the starting gear that neither side of the frame can be set in motion whilst the door is open and conversely, the door cannot be opened whilst either or both sides of the frame is/or are running:

Provided that in the case of machines installed before the commencement of this rule hinged and well secured doors will deemed to comply with it.(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 guard in its entirety. It 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 the commencement of this rule 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 guard 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 design 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 the commencement of this rule, guards rigidly secured by bolts or screws, will be deemed to comply with it.

8. Roll Winding machines.-Effective guard 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 dressing 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 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 3".

10. Looms.-(a) Sheet steel or cast iron guards protecting the crank and wyper shaft spur gears shall be provided.

(b)The minimum clearance between the sley and the breast beam shall not be less than 2".(c)Not later than six months after the commencement of this rule 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. Calendaring machines.-(a) A strong and rigid guard, securely fixed in position, in front of the nip between the bottom cast iron roller and the paper roller on top of same. This guard shall be constructed in such a manner that it will be impossible for 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 2½" 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 spur 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 side 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 the 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 jockey pulleys.

16. Press pits.-When the press table is levelled with the floor the clearance between it and the floor shall not be less than 4".

VI

Power Presses

1. Definition.-For the purpose of this schedule power press means a machine used in metal or other industries for moulding, pressing, blanking, raising, drawing and similar processes.

2. Starting and stopping mechanism.-The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of the 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 slip plate on the underside enclosing the front and sides of the 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 articles falls to the rear of the press.(c)The design, construction 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 sub-clauses (a) and (b) an automatic or an inter-locked 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 defect, the power press shall not be operated unless the defect of the guard is removed.

55A. General safety of buildings, structures, plants, machinery, etc.

(1)No building, wall, chimney, bridge, tunnel, drain, road gallery, passage, walkway or gage-way, ladder, stair-case, ramp floor, platform, staging, scaffolding or any other structure of bricks, masonary, cement, concrete, steel or any other material whether of a permanent or temporary character shall be constructed, situated, maintained or allowed to remain or be used in a factory and no machine, plant, equipment including electric lines, wiring, fitting and apparatus [apparatus as defined in clause (c) of rule 2 of the Indian Electricity Rules, 1956 made under the Indian Electricity Act, 1910], shall be constructed, provided, situated, maintained or allowed to be used or operated in a factory, in such manner as may, or is likely to, cause any accident or any bodily injury.(2)No process or work shall be carried on in any factory and no person shall be allowed to work on any process or any machinery, plant or equipment or in any part of a factory or in any other work in such manner as may, or is likely to cause any accident or any bodily injury.(3)No materials, articles or equipments shall be kept stacked or stored in such manner as may or is likely to cause any accident or any bodily injury.

56. Employment of young persons on dangerous machines.

- The following machines shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of Section 23(1) are complied with:-Power presses other than hydraulic presses;Milling machines used in the metal trades;Guillotine machines;Circular saws;Platen printing machines.

56A. Lifting machines, chains, ropes and lifting tackles.

- No lifting machine and no chain, rope or lifting tackle, except fibre rope or fibre rope sling shall be taken into 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:Provided that where lifting machine, chains, ropes or lifting tackles are already in use of a factory such a certificate shall be obtained within one month of the date on which this rule comes into effect.(2)(a)Every crane fitted with a derricking jib shall-(i)have plainly marked upon it the safe working load at various radit of the jib and the maximum radius at which the jib may be worked; and(ii)be fitted with an accurate indicator, clearly visible to the driver, showing the radius of the jib at any time and the safe working load corresponding to that radius.(b)No jib crane having either a fixed or a derricking jib shall be used after one year of the coming into effect of this rule unless it is fitted with an accurate automatic indicator which-(i)indicates clearly to the driver or person operating the crane when the load being carried or lifted approaches the safe working load of the crane for the radius of the jib at which the load is being carried or lifted; and(ii)gives an efficient sound signal when the load being carried or lifted is in excess of the safe working load of the crane at that radius:Provided that if a table showing the safe working loads at various radii of the jib is kept attached to the crane the requirements of clause (b) shall not apply to-(i)any guy derrick, crane, being a crane of which the mast is held upright solely by means of ropes with the necessary fittings and tightening screws;(ii)any hand crane used solely for dismantling another crane;(iii)any crane having a maximum safe working load of one ton or less.(3)A table showing the safe working loads of every kind and size of chain, rope or lifting tackle in use, and, in the case of a multiple sling, the safe working load at different angles of the legs shall be posted in the store in which the chains, ropes or lifting tackles are kept and in prominent positions on the premises and no rope, chain or lifting tackles not shown in the table shall be used. The foregoing provisions of this paragraph shall not apply in respect of any lifting tackle if the safe working load thereof, or in the case of a multiple sling, the safe working load at different angles of the legs, if plainly marked upon it.(4)Every travelling jib-crane on rails shall be provided with guards to remove any loose materials from the track.(5)(a)The register to be maintained under sub-clause (iii) of clause (a) of subsection (1) of Section 29 shall contain the following particulars, namely:-(i)name of the occupier of the factory;(ii)address of the factory;(iii)distinguishing number or mark, if any; and chain, description sufficient to identify the lifting machine, rope, or the lifting tackle;(iv)date on which 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-rules (1) and (9) together with the name and address of the person who issued the certificate;(vi)date of each periodical thorough examination made under sub-clause (iii) of clause (a) sub-section (1) of Section 29 and sub-rule (8) and the name of the person by whom it was carried out;(vii)date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (7) and the name of the person 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,(b)All certificates obtained under sub-rules (1) and (9) and reports of all examinations conducted under this rule shall be maintained in a register and shall be

kept readily available for inspection.(6)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 and provided with effective stops at the end;(7)All chains and lifting tackles, except a rope sling, shall unless they have been subjected to such other heat treatment as may be approved by the Chief Inspector of Factories, be effectively annealed under the direct supervision of a competent person at the following intervals, namely:-(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 12 months:Provided that chains and lifting tackles not in frequent use shall, subject to the Chief Inspector's approval, be annealed only when necessary and particulars of such annealing shall be entered in a register prescribed under sub-rule (5).(8)Nothing in the foregoing sub-rule (7) shall apply to following classes of chains and lifting tackles, namely:-(i)chains made of malleable cast iron;(ii)plate link chains;(iii)chains, rings, hooks, shackles and swivels made of steel or of an non-ferrous metal;(iv)pitched chains, working on sprocket or pocketed wheel;(v)rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines;(vi)hooks and swivels having screw threaded part or ball bearing or other case hardened parts;(vii)socket shackles secured to wire ropes by white metal capping;(viii)Bordeaux connections.Such chains and lifting tackles 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 (5).(9)All lifting machines, chains, ropes and lifting tackles 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 retested and re-examined by a competent person and a certificate of such test examination be obtained and particulars entered in the register kept in accordance with sub-rule (5).(10)No person under eighteen years of age and no person who is not sufficiently competent 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.(11)Where there are more than one lifting machines, chains, ropes and lifting tackles in a factory, each one of them should be given a distinguishing mark or number for the purpose of identification.(12)Where in the opinion of the State Government, compliance with any of the provisions of this rule is considered unnecessary or impracticable, the Chief Inspector may, subject to the approval of the State Government, by order in writing, exempt any lifting machine or lifting tackle therefrom, subject to such conditions as may be specified in the said order:Provided that the Chief Inspector may subject to the approval of the State Government, rescind or modify any such order whenever he considers it necessary without assigning any reason.

56B. Passage ways and clearance for over-head travelling cranes.

(1)(a)Passage-way shall be provided along and adjacent to every rail-track of every over-head travelling crane of such width that there is a clear space of not less than 50 c.m. between any part of any crane operating on the track and any column, fixture or fixed structure, so that no person working or walking over the passageway may be struck by any part of the crane.(b)There should be railings at a height of at least 90 c.m. from the floor of passage-way on both the sides, with at least two rails and with a toe board at a height of at least 10 c.m. from the floor:Provided that if there is a

wall or sheeting on one side of the walk-way the railings may be provided on only the other side.(c)Safe access ladders with hand rails shall be provided at convenient places and at suitable frequent intervals so that the crane driver or any other person going up the crane or crane track may not have to walk long distances on the passage-way.(d)Where there are more than one cranes operating in the same way as on the same run-way, the number of access ladders shall be provided in consideration of the easy and safe accessibility to the different cranes.(2)For the repair of the track equipments of cranes and for greater convenience and safety in changing track wheels if there is no sufficient distance between the end of the crane and the wall of the building, special recesses or platform with safe access ladders shall be built at different places in the building.(3)The vertical clearance between the floors of crane bridge or trolley foot-walks or platforms on travelling cranes and over head trusses, structural parts or any other permanent fixture shall not be less than two metres.(4)The provision of sub-rule (i) shall apply only to factories constructed after the 1st January, 1975 and also to cranes installed in existing factories after the said date and sub-rules (ii) and (iii) shall apply to the factories constructed after the 4th February, 1963 and the cranes installed in existing factories after said date:Provided that the Chief Inspector may, with the approval of the State Government, exempt any such factory in respect of any particular over-head travelling crane from the operation of any provision of the said sub-rules subject to such conditions as he may specify in writing.(5)In respect of any over-head travelling crane already in operation on the date of coming into force of this rule in any factory, the Chief Inspector may, by an order in writing, direct such measures to be taken within a specified time as he may consider practicable and necessary to prevent accidents due to the movement of the cranes.(6)These rules are without any prejudice to, and in addition to and not in derogation to the provisions of Section 32 of the Factories Act, 1948; and(7)The Chief Inspector may, with the approval of the State Government, exempt any over-head travelling crane in any factory from the operation of any of the provisions of this rule subject to such conditions as he may specify in writing.

56C. Fragile roofs-provision of crawling boards, etc.

(1)In any factory no person shall be 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, plain, corrugated or otherwise, made of cement, cement mixed with asbestos or with any other material or any other similar materials in respect of which there may be danger of the sheet- breaking due to the weight of a man, and no person shall be 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 and crawling boards 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 warning that the roof was of fragile material and was dangerous and that no person should go on the roof unless full protective measures have been taken is displayed at such a prominent place and in such a manner as to attract immediate attention; and(d)a permit to work on the roof has been issued to the person by a responsible person duly authorised for this purpose by the Manager.(2)All preparatory work like cutting, trimming, piercing, etc., of the sheets or of any other material or articles to be used on a roof shall be carried out on the ground and carrying out of any such work on the roof shall be totally prohibited and shall not be allowed."

57. Pressure Plant.

(1)Every plant or machinery used in a factory and operated at a pressure greater than atmospheric pressure shall be-(a)of good construction, sound material, adequate strength and free from any patent defect;(b)properly maintained in a safe condition;(c)fitted with-(i)a suitable safety valve or other effective device to ensure that a maximum permissible working pressure of the vessel shall not be exceeded;(ii)a suitable pressure gauge easily visible and designed to show at all times the correct internal pressure in lbs. per square inch, or in kilogram per square centimetre, and marked with a prominent red mark at the safe working pressure of the vessel:(iii)a suitable stop valve or valves by which the vessel may be isolated from other vessels or source of supply of pressure; and(iv)a suitable drain cock or valves at the lowest part of the vessel for the discharge of collected liquid,(d)thoroughly examined by a competent person:-(i)externally once in every period of six months;(ii)internally, once in every period of twelve months:Provided that if by reason of design, construction and use of the vessel a thorough internal examination is not possible, this examination may be replaced by a hydraulic test which shall be carried out once in every two years in case of vessels not in continuous processes and once in every four years in case of vessels in continuous processes; and(iii)Hydraulically tested at intervals of not more than four years:Provided that in respect of pressure vessels with thin walls such as, sizing cylinders made of copper or any other non-ferrous metal periodic hydraulic test may be dispensed with on condition that the requirements laid down in sub-rule (5) are fulfilled:Provided further that it shall be sufficient for the purposes of clause (c) of this rule if the safety valve, pressure gauge and stop valve are mounted on a pipe line immediately adjacent to the vessel and where there is a range of two or more similar vessels in a plant served by the same pressure lead, only one set of such mountings need be fitted in case they cannot be isolated.(2)The requirements of this rule shall be in addition to and not in derogation of the requirements of any other Act, rules or regulations in force.(3)Nothing in this rule shall apply to-(a)any vessel which comes within the scope of the Indian Boiler Act, 1923 (V of 1923),(b)metal bottles or cylinders used for the storage or transport of compressed gases or liquefied or dissolved gases under pressure covered by the Gas Cylinder Rules, 1940 framed under the Indian Explosives Act, 1884 (IV of 1884);(c)feed pumps, steam traps, turbine casings, compressor, cylinders, cylinders of prime-movers, steam separators or dryers, steam strainers, steam de-superheater, oil separators, air receivers for fire sprinkler installations, air receivers of monotype machines, provided the maximum working pressure of the air receiver does not exceed 20 lbs. per square inch and capacity, does not exceed 3 cubic feet, air receivers of electrical circuit breakers, air receivers of 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 subject to static head only and hydraulically operating cylinders other than any communicating with an air loaded accumulator, and(d)Water sealed gas-holder mentioned in rule 57-A.Note.-For the purposes of this rule, the expression-(a) "thin walled vessels," means vessel incapable of holding weight of water;(b)"competent person" means a person holding any of qualifications exempting him from passing Parts A and B of the Associate Membership Examination of the Institution of Engineers (India) or any other person whom the Chief Inspector considers competent for any specified purpose by virtue of his experience; and(c)"vessel" means an enclosed vessel of any capacity and include any other plant or machinery working at a pressure higher than the atmospheric pressure.(4)(a)In respect of pressure vessels of thin walls such as sizing cylinders made

of copper or any other non-ferrous metal the safe working pressure shall be reduced at the rate of five percent of the original working pressure for every year and no such cylinder shall be continued to be used for more than twenty years after it was first taken into use.(b)If no information as to the date of construction, thickness of walls and safe working pressure is available, the age of the sizing cylinder shall be determined by the competent person in consultation with the Chief Inspector from any other particulars available with the manager.(c)Every new and second hand cylinder of thin walls to which repairs which may effect its safety, have been carried out, shall be tested before use to, at least one and a half times its working pressure.(5)Every vessel operated at a pressure greater than atmospheric pressure, and not so constructed as to withstand with safety the maximum permissible working pressure at the source of supply, or the maximum pressure which can be obtained in the pipe connecting the vessel with any other source of supply shall be fitted with a suitable reducing valve or other suitable automatic device to prevent the safe working pressure of the vessel being exceeded.(6)In a plant in which owing to the nature of the process or the action of the contents of the vessel, a pressure gauge or safety valve or both cannot work reliably, a tested and reliable working thermometer with a sufficiently large scale, on which shall be clearly marked the maximum permissible temperature in the vessel, or barometers or rupture disce in addition to the pressure gauge and safety valve shall be fitted.(7)If during thorough examination any doubt arises as to the capacity of a vessel to work safely until the next examination, provided for in these rules, the competent person shall enter in the prescribed register his observation and remark with reasons and may authorise the vessel to work further, subject to a lowering of pressure or to more frequent inspection or subject to both these conditions.(8)No vessel which has undergone alterations or repairs shall be put to use unless it is thoroughly examined by competent person.(9)A report of the result of every examination, made shall be completed in Form 8 and signed by the person marking the examination, and shall be kept available for perusal by an Inspector at any time while the vessel is in service.(10)No vessel which has previously been used shall be taken into use in any factory for the first time in a factory until it has been examined and reported in accordance with these rules and no new vessel shall be taken into use unless there has been obtained from the maker of the vessel, or from a competent person, a certificate specifying the maximum permissible working pressure thereof, and stating the nature of the tests to which the vessel and its fittings (if any) have been subjected and certificate is kept available for perusal by an Inspector and vessel is so marked as to enable it to be identified with the certificate relating to the same.(11)Where the report of any examination under these rules specified conditions for securing the safe working of a vessel, the vessel shall not be used except in accordance with those conditions.(12)The competent person making the 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 where the examination shows that the plant cannot continue to be used with safety unless certain repairs are carried out immediately or within a specified time.(13)Where there are more than one pressure plants or vessels in a factory each such plant or vessel should be given a distinctive number.(14)The Chief Inspector may, by an order in writing, exempt, subject to such conditions as he may specify, from any of the provisions of this rule any pressure vessel or pressure plant if he is satisfied that such provision need not be applied in consideration of the special nature of its construction or use of any other matter. Such orders may at any time be revoked by the Chief Inspector without assigning any reason.

57A.

(1)(a)The expression "gas-holder" for the purpose of the rule, means "water sealed gas-holder".(b)This rule shall apply to only such gas-holders as have a storage capacity of not less than 141-6 cubic meters (5,000 c.ft).(2)Every gas-holder shall be of good and sound construction and material, and of adequate strength, shall be free from defects patent or otherwise and shall be properly maintained.(3)Where there are more than one gas-holder in a factory every gasholder shall be given a distinguishing number and the numbers shall be marked on the respective gas-holders in bold letter and in a conspicuous position.(4)Every gas-holder shall be thoroughly examined externally by a competent person at least once in every period of twelve months.(5)No gas-holder, any lift of which has been in use for ten years,shall be used unless the internal condition to the sheeting is thoroughly examined by a competent person, by means of an electronic device or by a similar accurate device approved by the Chief Inspector and in case of any, gas-holder any lift of which has already been in use for ten years or more on the date on which this rule comes into force, such examination shall be carried out within the period of one year from the said date but, in exceptional cases such a period may be extended up to two years by the Chief Inspector. This examination shall be extended up to two years by the Chief Inspector. This examination shall be repeated once in every four years after the above mentioned first examination:Provided that if the Chief Inspector is satisfied that the devices mentioned in this sub-rule are not available, he may permit the examination to be carried out by cutting out samples from the crown and the sides of the gas-holder or other method approved by him:Provided further that if the above inspection raises any doubt, an internal visual examination shall be made.(6)(a)After every examination conducted in accordance with sub-rules (1) and (5), the manager or the occupier shall obtain report from the person carrying out the examination in Form No. 31 and shall take immediate steps to rectify the defects if any, pointed out in the report and carry out such repairs or take such steps as may be recommended or suggested in the report.Entries in respect of such steps shall be made in the form of the report as well as in the register in Form No.30.(b)All reports in Form No. 31 shall be kept and mentioned in a bound register or in such other manner as may be convenient and shall be produced before an Inspector whenever acquired to do so.(7)All possible steps shall be taken and device applied to prevent ingress of any impurity in gas-holders.(8)No gas-holder shall be repaired or demolished except under the direct supervision of a person who by his training and experience and by his knowledge of the necessary precautions against risk of explosions and gassing, is competent to supervise such work.(9)All samples cut under sub-rule (5) shall be kept readily available for inspection by the Inspector.(10)A permanent bound register in Form No. 30 duly signed by the occupier or manager shall be maintained and shall be produced before the Inspector whenever required to do so.Explanation.-A competent person for the purposes of this rule means a person having a Degree or Diploma in Mechanical or Chemical Engineering with at least three year's practical experience of operation, maintenance or repairs of such gas-plants, or any other person with at least ten years experience thereof if he does not possess any such degree.

58. Excessive weights.

(1)No person shall without the aid of any other person or mechanical appliances, be allowed to lift, carry or move manually or otherwise any material or article which exceeds the weight specified for

each class of persons in the following schedule:-

Schedule 9

	Persons	Maximum weight of materialarticle, tool orappliances
(a) Adult male	...	[55 kgs] [Substituted by S.O. 686 dated 13.7.1988.]
(b) Adult female	...	30 kgs.
(c) Adolescent Male	...	30 kgs.
(d) Adolescent Female	...	20 kgs.
(e) Male child	...	16 kgs.
(f) Female child	...	13 kgs.

(2)No person shall engage, 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 persons engaged, multiplied by the number of persons engaged.(3)A woman, who is pregnant, may be employed in any factory to lift, carry, or move by hand or on head, any load not exceeding 18.5 kgs, in weight till the end of seven months of pregnancy but she shall not be employed in any factory to lift, carry or move by hand or on head any load after the end of seventh month.(4)The State Government or the Chief Inspector subject to the control of the State Government may by an order in writing relax the maximum weight specified in the schedule to sub-rule (1) in respect of any factory or class of factory for a period not exceeding three months at a time and liable to be rescinded or withdrawn at any time without assigning any reason and subject to such conditions as may be specified in the said order.

59. Protection of Eyes.

- Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the vicinity or the processes specified in the schedule annexed hereto being processes which involve risk of injury to the eyes from particles or fragments thrown in the course of the process and also by reason of exposure to light.

Schedule 10

1. Breaking, cutting, pressing or curving of bricks, stone, concrete, slag or similar material by means of hammer chisel pick, or any other hand tools, or by means of a portable tool driven by power, and dry grinding of surfaces of any such material by means of a wheel or disc driven by power.

2. Dry grinding of surface of metal or any articles of metal by applying the same by band to a wheel disc or band driven by power, or by means of a portable tool driven by power.

3. Dividing in to separate parts of metal, or any article of metal brick, stone concrete or similar materials by means of a saw driven by power or by means of an abrasive cutting wheel or disc driven by power.

4. Turning of metal or any article metal.

5. Drilling by means of portable tool.

6. Welding and cutting of metal or any article of metal by means of an electric, oxy-acetylence or similar process.

7. Hot fettling of steel casting by means of a flux injected burner or air torch and de-seaming of metal.

8. Fettling of metal casting; involving removal of metal, including runners, gates and risers and removal of any other material during the course of such feeling.

9. Chipping of metal or any article of metal, and chipping, knocking out, cutting out or cutting of cold river, bolt, nut lug, pin, collar or similar articles from any structure of plant or form part of any structure of plant by means of a hammer, chisel, punch, or similar hand tools, or by means of a portable tool driven by power.

10. Chipping or surfing of paint, scale, slag, rust or other corrosion from the surface of metal or other hard material by means of a hand tool or by a portable tool driven by power.

11. Breaking of scrap metal by means of a hammer or by means of a tool driven by power.

12. Routing of metal.

13. Work on drop hammer and power hammer and work by any person not working on such hammer but whose working is carried on in such circumstance and in such a position that particles or fragments are liable to be thrown off towards him.

14. Work at furnace where there is risk to eyes from molten metal.

15. Pouring or skimming of molten metal.

16. Working involving risk to the eyes from heat being thrown off.

17. Truing or dressing of abrasive wheel.

18. Handling in open vessel or manipulation of strong acid or dangerous corrosive liquid or material, and operation, maintenance or dismantling of plant or any part of plant, being plant or part of plant which contains or has contained such acid, liquid or material unless the plant or part of plant has been so prepared by isolation, reduction of pressure, or otherwise, treated, or designed and constructed as to prevent risk of injury.

19. Any other process wherein there is any risk of injury to eyes from particles or fragment thrown off during the course of the process.

59A. Register of names.

- In every factory a register shall be maintained in Form no. 32 in which the name of every worker (alongwith such other particulars as are required to be furnished in the said register) shall be recorded, who may be employed or may be required to perform the work specified in sub-section (1) of Section 21, and no worker shall be allowed to carry out any such duty unless his name with full particulars has been recorded in the said register. This register shall be produced forthwith before an Inspector whenever demanded by him.

59B. Restriction on employment of young persons.

(1)No young person shall be allowed to work at or near any machine specified in Sections 21, 28, 29, 30, 31 or on any machine plant, or process specified in the schedules attached to rule 95, or on any other plant, machine or process in which there may be any hazard of fire, explosion or of injury to health unless (a) he has been fully instructed as to the dangers arising therefrom and the precautions to be observed, and (b) has received sufficient training in work at the machine, plant or process, or is under the direct and adequate supervision of a person who has a thorough knowledge and experience thereof.(2)Before any young person is allowed to work on any machine, plant or process specified in sub-rule (2) the Manager or any other responsible person duly authorised by the Manager, shall give a certificate in Form no. 33 and every such certificate shall be kept and maintained in the form of a bound book and the said register shall be produced before an Inspector forthwith whenever demanded by him.(3)This rule is without any prejudice to and in addition to and not in derogation to any provision of any other rule or of the Act.

59C. [Examination of eye sight of certain workers. [Inserted by S.O. 686 dated 13.7.1988]

(1)No person shall be employed to operate a crane, locomotive fork-lift truck, pay loaders, dumpers or other automobiles or to give signals to a Crane or Locomotive operator unless his eye-sight and colour vision have been examined by a qualified ophthalmologist, approved by the Inspector and declare fit to work whether with or without the use of corrective glasses.(2)The eye-sight and colour vision of the person employed as referred to in sub-rule (1) shall be examined at least once in every period of 12 months up to the age of 45 years and once in every six months beyond that age.(3)Any fee payable for an examination or any cost involved for corrective glasses under sub-rules (1) and (2) shall be paid by the occupier and shall not be recoverable from the person.(4)The rector of examination and re-examination carried out as required in sub-rules (1) and (2) above shall be maintained in Form no. 35 appended to this and a copy thereof be sent to the Inspector within fifteen days from date of examination.]

60. Minimum dimensions of manholes.

- Every chamber, tank, vat, pipe, flue or other confined space, 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 16 inches long and 12 inches wide.(b)in the case of a circular shape, be not less than 16 inches in diameter.

61. 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 gas-holder shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas, cokeoven gas, producer gas, blast furnace gas, or gases, other than air, used in their manufacture:Provided that this exemption shall not apply to any gas-holder containing acetylence 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 operative under the constant supervision of a competent person.(b)The operations 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 services 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, 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 the 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 of the electric weldings process shall be subject to the following conditions:-(i)The only oil contained in the tank shall have a flash point of not less than 150° F (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 one foot below the nearest part of the surface of the oil within the tank; and(iv)Welding shall be done only by the electric welding and shall be carried out by experienced operatives under the constant supervision of a competent person.General

62. [[Inserted by S.O. 686 dated 13.7.1988.]

(1)Processes, equipment, plant, etc. involving serious fire hazard.-(a) All processes involving serious explosing and flash fire hazard 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 hazard should be located in building or work place separated from one another by walls of fire resistant construction.(c)Equipment and plant involving serious fire or flash fire hazard shall, wherever possible, be so constructed and installed that in case of fire, they can be easily isolated.(d)Ventilation ducts, pneumatic conveyors and similar equipment, involving a serious fire risk should be provided with flame arresting or automatic fire extinguishing appliances.(e)In all work places having serious fire or flash-fire hazards, passages between machines, installations or piles of material should be at least 90 cm.]Fire Prevention(2)Protection against lighting.-Protection from lighting shall be provided for:-(a) buildings 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; and(d)buildings, tall chimneys or stacks where flammable gases, fumes, dust or lint are likely to be present.(3)Explosives.-All explosives shall be handled, transported, stored and used in accordance with the provisions in the Indian Explosives Act, 1884.(4)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 or their being a source of ignition;(b)effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;(c)Workers shall wear shoes without iron or steel nails or any other exposed.(d)smoking, lighting or carrying of matches, lighters or smoking materials, ferrous materials which is likely to cause sparks by friction;shall be prohibited;(e)transmission belts with iron fasteners shall not 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 flames, frictional sparks, overheated surfaces of machinery or plants, chemical or physical chemical reaction and radiant heat.(5)Spontaneous ignition.-Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation.(6)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 room where such cylinders are stored shall have adequate ventilation.(7)Storage of flammable liquids.-(a) The quantity of flammable liquids in any work room shall be the minimum required for the process or processes carried on in such room. Flammable liquids shall be stored in suitable containers with close fitting covers:Provided that not more than 20 litres of flammable liquids having a flash point of 21°C 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 of fire resistant construction which are isolated from the remainder or the building by fire walls and self closing arc doors.(c)Large quantities of such liquids shall be stored in isolated adequately ventilated building or fire resisting construction or in storage tanks, preferably under-ground and 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 capacing liquids within safe limits.(8)Accumulation of flammable dust, gas, fume or vapour in air or flam-triable waste material on the floors.-(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.(b)No waste material of a flammable nature shall be permitted to accumulate on the floors and shall be removed at least once in a day or shift, any more often when possible. Such materials shall be placed in suitable metal containers with covers wherever possible.Emergent Fire Exits(9)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 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)An exit may be door-way, corridor, passageway to an internal or external stairway or to a verandah. An exit may also include a horizontal exit leading to an adjoining building at the same level.(c)Lifts, escalators and revolving-doors shall not be considered as exits for the purpose of this sub-rule.(d)In every room of a factory exits sufficient to permit safe escape of the occupants in case of 'lire or other emergency shall be provided which shall be free of any obstruction.(e)The exits shall be clearly visible and suitably illuminated with suitable arrangement, whatever artificial lighting is to be adopted for this purpose to maintain the required illumination in case of failure of the normal source of electric supply.(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 3ong the escape routes to prevent spread of fire and smoKe particularly at the entrance of lifts or stairs were funnel of flue effect may be created inducing an upward spread of fire.(h)All exists 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 meters.(j)In case of these factories where high hazard materials are stored or used, the travel distance to the exit shall rot exceed 22.5 meters 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 suitable shielded from area 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 50cm. for stairs and 75cm. 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 meters per person, whichever in 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.(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 means of escape for any person employed therein, and in any such room wherein more than 10 persons may be 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 exist, on a corridor or passageway providing continuous and protected means of egress.(s)No exit doorway 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 long any exist. No door when opened, shall reduce the required width of stairway or landing to less than 90 cm. over head or sliding doors shall not be installed for this purpose.(u)An exit door shall not open immediately upon a flight of stairs. A landing equal to at least the width of the doorway 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.(v)The exit doorways shall be 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 meters.(y)Internal stairs shall be constructed of non-combustible materials throughout.(z)Internal stairs shall be constructed as a self contained with at least one side adjacent to an external wall and shall be completely enclosed.(aa)A stair case shall not be arranged round a 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.(ab)Hollow combustible construction shall not be permitted.(ac)The minimum width of an internal stair case shall be 100 cm.(ad)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.(ae)The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight.(af)Hand rails shall be provided with a minimum height of 100 cm. and shall . be firmly supported.(ag)The use of spiral stair case shall be limited to low occupant lead and to a building of height of 9 meters, 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. diameter and have adequate head room.(ah)The width of a horizontal exit shall be same as for the exit doorway.(ai)The horizontal exit shall be equipped with at least one fire door of self closing type.(aj)The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor area served, allowing not less than 0.3 square meter 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.(ak)Where there is difference in level between connected areas for horizontal exit, ramps not more than 1 in 8 slope shall be provided. For this purpose steps shall not be used.(al)Doors in horizontal exits shall be operable at all times.(am)Ramps with a slope of not more than 1 in 10 may be substituted for the requirements of 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.(an)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 no manual fire alarm shall be required in one-storey buildings where the entire area is undivided and all parts thereof are clearly visible to all occupants.Fire Fighting(10)First-aid fire fighting arrangements.-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.(11)The types of first aid fire fighting equipment to be provided shall be determined by considering the different types of fire risk which are classified as follows(a)"Class A fire".-(a) Fire due to combustible materials such as wood, textiles, paper, rubbish and the like-(i)"Light hazard".-Occupancies like offices, assembly halls, canteens, restrooms, ambulance room and the like;(ii)"Ordinary hazard."-Occupancies like saw mills, careentary shop, small timber yards, book binding shops engineering workshop and the like;(iii)"Extra Hazard".-Occupancies like large timber yards, godowns, storing fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and 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, materials and the like;(e)Class E fire.-Fire involving electrical equipment and delicate machinery and the like;(12)The number and types of first-aid fire fighting equipment to be provided shall be as per the following scale:-(a)Class A fire-(i)Light hazard.-One 9 litre water bucket for every 100 square metres of floor area or part thereof and 9 litre water type (soda), acid or gas pressure or bucket pump extinguisher shall be provided for each 6 buckets or part thereof with a minimum of the extinguisher and two buckets per compartment of the building. These equipments shall be as distributed over the entire that a person have to travel not more than 25 metres from any point to reach the nearest equipment.(ii)Ordinary hazard.-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) extinguisher minimum of 2 extinguisher and 4 buckets per compartment of the building. The equipment shall be so distributed over the entire floor area that a person shall have to travel not more than 15 metre from any point to reach the nearest equipment.(iii)Extra hazard.-The scale of equipment would 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 case, the Inspector, after taking into consideration the circumstances, authorise that the buckets prescribed in this clause may be dispensed with, provided the number of the extinguishers provided is double than that is prescribed.(b)Class B fire.-There shall be at least one fire extinguisher either foam type or carbon dioxide or dry powder per 50 square metres of floor area and shall be so distributed that no person is required to travel more than 15 metres from any point to reach the nearest equipment. In addition to the requirement of extinguishers specified here, requirements as laid down in clause (a) shall also be provided..(c)Class C fire.-Carbon dioxide or dry chemical power extinguishers shall be provided near each plant or group of plants.(d)Class D fire.-Special dry power (chloride based) type of extinguishers, or sand buckets shall be provided on a scale as laid down for class B fire. The Inspector may require a higher scale of portable equipment to be provided depending upon the risk involved.(e)Class E fire.-Carbon dioxide or dry power type extinguishers shall be provided near each plant or group of plants depending upon the risk involved.(13)The first-aid fighting equipment shall confirm to the relevant Indian Standards.(14)As far as possible the

first-aid fire fighting equipment shall be similar in shape and appearance and shall have the same method of operation.(15)All first-aid fire fighting equipments 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 scape.(16)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.(17)All other extinguishers shall be charged appropriately in accordance with the instruction of the manufacture.(18)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:-(i)Serial number;(ii)Date of last refilling; and(iii)Date of last inspection.(19)First-aid fire fighting equipment shall be placed on platform 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 at a suitable stand or wall in such way that their bottom is 750 mm. above the floor level. Such equipment, if placed outside the building, shall be under sheds or covers.(20)All extinguishers shall be thoroughly cleaned and re-charged immediately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times.(21)All first-aid fire fighting equipment shall be subject to routine maintenance, inspection, and testing to be carried out by properly trained persons, Periodicity of the routine maintenance, inspection and test shall conform to the relevant Indian Standards. Records in respect of inspection, maintenance and testing of all first-aid fire fighting equipment shall be maintained in a bound register and shall be produced for inspection on demand.(22)Other fire-fighting arrangement.-(a) In every factory, adequate provision of water supply for fire-fighting shall be made and where the amount of water required in litre 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 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; andD = 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 on fire insurance company such areas may, for the purpose of calculation, be halved:Provided also that where the factory is situated at not more than 3 kilometers from an establishment city or town fire service, the pumping capacity based on the 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)(i)Each trailer pump shall be provided with equipment as per schedule appended to this rule.(ii)In addition to the equipments specified in the said schedule each trailer pump shall be provided with adequate breathing apparatus.(iii)The Chief Inspector may by an order in writing direct the occupier and/or Manager of a factory to provide such additional equipments and breathing apparatus and of such type as he may consider necessary in consideration of the nature and degree of hazards.(iv)The equipment specified in this sub-rule shall conform to such Indian Standards specification as may be in existence.(c)Trailer pumps shall be housed in a separate shed or sheds which shall be sited close to a principle source of water supplies in the vicinity of the main risks of the factory.(d)In factories

where the area in such as cannot be reached by menhauling 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 lest 50 per cent of this water-supply for, 4,50,000 litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than 4,50,000 litres each) distributed round the factory with due regard to the potential fire risk in the factory (where piped supply is provided, the size of the main shall not be less than 15 centimeters diameter and it shall be supplying a minimum of 4,500 litres per minute at a pressure of not less than 7 kilograms per square centimeter).(f)All trailer pumps including the equipment provided with them and vehicles for towing them shall be maintained in good condition and subjected to periodical inspection and testing as required.(23)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 shall be in charge of a trained responsible person:Provided that in factories where power driven trailer pumps, fire engine or similar devices are provided or are required to be provided under these rules, adequate number of wholetime, suitable and adequately trained persons shall be employed throughout the day and night and on all days whether working day or a holiday, who shall be responsible for the maintenance, upkeep and operation of these machines and vehicles. In such factories there shall be a senior Fire Officer who shall be in overall charge of fire-fighting, arrangement and operations and who shall be responsible for training the workers in the use of fire extinguishers and other fire-fighting equipments.(b)Sufficient number of persons shall be trained in the proper handing of fire fighting equipments 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 equipment and others. Wherever vehicles with' towing attachment are to be provided as required in clause (d) of sub-rule 22 sufficient number of persons shall be trained in driving, where the need arises, those vehicles to ensure that trained persons are available for driving them.(c)Fire-fighting drills shall be held at least once in every 3 months, and records in respect of such periodical drills shall be maintained in a bound register and shall be produced for inspection on demand.(24)Automatic sprinklers and fire-hydrants shall be in addition and not in substitution of the requirement in sub-rules (10) and (22).(25)Access for fire-fighting buildings and plants shall be so laid out and roads, passageways etc. so maintained as to permit unobstructed access for fire-fighting.(26)If the Chief Inspector is satisfied in respect of any factory or any part of the 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 the rules 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 the factory from all or any of the provisions of the rules subject to conditions as he may by such order prescribe.

Schedule 11

[See Rules 62 (22) (25) (1)]Equipment to be provided with Trailer Pump.For light trailer pump of a capacity of 860 litres/minutes.-

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 adapter.

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

1. Dividing breaching-piece.

2. Branch-piece with 15 mm, nozzles.

1. Diffuser nozzle.

1. Standpipe with blank cap.

1. Hydrant key.

4. Collapsible canvas bucket.

1. Fire hock (preventer) with cutting edge.

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

1. Extension ladder of 9 meters length (where necessary).

1. Heavy axe.

1. Spade.

1. Pick axe.

1. Crowbar.

1. Saw.

1. Hurricane lamp.

1. Electric torch.

1. Pair-rubber gloves.

For large trailer pump of a capacity of 1,800 litres/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 adapter

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

1. Dividing breaching piece.

1. Collective breaching piece.

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

2. Standpipes with blank caps.

2. Hydrant keys.

6. Collapsible canvas buckets.

1. Celling hook (preventor) with cutting edge.

1. 50 m.m. manila rope of 30 metre length.

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

1. Heavy 2 axe.

1. Spade.

1. Pick axe.

1. Crowbar.

1. Saw.

1. Hurricane lamp.

7. Electric torch.

1. Pair rubber gloves.

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.

62A.

[x x x] [Omitted by S.O. 686 dated 13.7.1988.]

62B. [Safety Officers. [Substituted by S.O. 686 dated 13.7.1988.]

(1)Definitions.-In these Rules unless there is anything repugnant in the subject or context "Safety Officer" means any officer by whatever designation known, possessing the qualifications prescribed in this Rule and employed by the occupier of a factory to look after the duties of a safety officer prescribed in this Rule.(2)Qualification.-(a) A person shall not be eligible for appointment as a Safety Officer unless he-(i)Possesses a recognised degree in any branch of engineering or technology and has had practical experience of working in a factory in a supervisory capacity for a period of not less than 2 years; or a recognised degree in physics or chemistry and has a practical experience of working in a factory in a supervisory capacity for a period of not less than 6 years or a recognised diploma in any branch of engineering or technology and has had practical experience of working in a factory in a supervisory capacity for a period of not less than 4 years.(ii)Possesses a degree or diploma in industrial safety recognised by the State Government in this behalf; or has qualified at a

written and viva-voca examination conducted by the Chief Inspector:Provided that such examinations shall be conducted only till adequate number of persons possessing degree or diploma in safety recognised by the State Government are not available.(b)Notwithstanding the provisions in clause (a) any person who possesses a recognised degree in engineering or technology and has had experience of not less than 2 years, in a department of the Central or State Government which deals with the administration of the Factories Act, 1948, orPossesses a recognised degree or diploma in engineering or technology and has had experience of not less than 5 years, full time, on training, education, consultancy, or research in the field of accident prevention in industry or in any recognised institution, shall also be eligible for appointment as a Safety Officer:Provided that the Chief Inspector may, subject to such conditions as it may specify, grant exemption from the requirements of whole or part of sub-rule (2); if in his opinion a suitable person possessing the necessary qualifications and experience is not available for appointment:Provided further that in the case of a person who has been working as a Safety Officer for a period not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to such conditions as he may specify in writing relax all or any of the above said qualifications.(3)Conditions of Service.-(a) Where the number of Safety officers, to be appointed in a factory exceeds one, one of them shall be designated as the Chief Safety Officer and shall have a status higher than that of the others. The Chief Safety Officer shall be in overall charge of the safety functions as envisaged in sub-rule (4), the other Safety Officer working under his control.(b)The Chief Safety Officer shall be given the status of Departmental Head and shall work directly under the control of the Chief Executive of the factory. All other Safety Officers shall be given appropriate status to enable them to discharge their functions effectively.(c)The scale of pay and the allowance to be granted to the Safety Officers including the Chief Safety Officer, and the other conditions at their service "shall be the same as those of the other officers of corresponding status in the factory.(d)In the case of dismissal or discharge, a Safety Officer shall have a right to appeal to the Chief Inspector:Provided that all disputes against the orders of the Chief Inspector shall be settled by an appeal to the State Government, whose decision thereon shall be final :Provided further that no punishment of any kind shall be inflicted unless the Officer has first been informed in writing of the grounds on which it is proposed to take action and has been offered an adequate opportunity of defending himself.(4)Duties of Safety Officers.-(a) The duties of a Safety Officer shall be to advice and assist the factory management in the fulfilment of its obligations, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe and healthy working environment. These duties shall include the following namely:-(i)to advise the concerned departments in planning and organising measures necessary for the effective control of personal injuries;(ii)to advise on safety aspects in all job studies, and to carry out detailed job safety studies on selected jobs;(iii)to check and evaluate the effectiveness of the action taken or proposed to be taken to prevent personal injuries;(iv)to advise the purchasing and stores departments in ensuring availability of high quality personal protective equipment;(v)to render advice on matters relating to carrying out of plant safety inspections;(vi)to carry out plant safety inspections in order to observe the physical conditions of work and the work practices and procedures followed by workers and to render advice on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by workers;(vii)to render advice on matters related to reporting and investigations of industrial accidents and diseases;(viii)to investigate accidents, locate causes and render advice on measures to be adopted for removing the causes of accidents. Accident shall include all major or minor injury cases;(ix)to investigate the

cases of industrial diseases contracted and dangerous occurrences reportable under rule 96;(x)to advise on the maintenance of such records relating to accidents, dangerous occurrences and industrial diseases as are necessary;(xi)to promote setting up of safety committees according to the provisions of rule 62-A*;(xii)to organise in association with the concerned departments, awards, campaigns, competitions and other activities which will develop and sustain the interest of the workers in establishing and maintaining safe conditions of work and procedures; and(xiii)to design and conduct either independently or in collaboration with the training departments, suitable training and educational programme related to and required for the prevention of personal injuries.(5)Employment of Safety Officers.-The minimum number of Safety Officers to be employed by the occupier of any factory shall be as follows:-(a)For all factories wherein 1,000 or more workers are ordinarily employed-(i)Where the number of workers ordinarily employed in a factory is not less than 1,000 and not more than 1,500-one Safety Officer;(ii)Where the number of workers ordinarily employed in a factory is more than 1,500, but does not exceed 10,000-One additional Safety Officer for every 1,500 workers in excess of 1,500:Provided that in calculating the number of Safety Officers under this clause any odd number of workers less than 1,500 shall be reckoned as 1,500;(iii)Where the number of workers ordinarily employed exceeds 10,000-One Safety Officer for every 2,000 workers above 10,000:Provided that for calculating the number of additional Safety Officers under this clause any odd number of workers less than 2,000 shall be reckoned as 2,000:Provided further that, where the number of workers exceeds 10,000 there shall be one Chief Safety Officers in addition to the Safety Officers required to be employed under this rule in the rank of at least a Chief Engineer.(b)For all factories wherein manufacturing processes or operations declared to be dangerous under Section 87 of Factories Act, 1948, by Rule 95 of Bihar Factories Rules, 1950 are carried on:-(i)Where the number of workers ordinarily employed in a factory is more than 500-One Safety Officer;(ii)Where the number of workers ordinarily employed in a factory is more than 1,000 the number of Safety Officers to be employed shall be as specified in sub-rule 5(a).(c)For all Factories wherein apart from normal manufacturing operations construction, demolition, modification or similar work are carried on and where in more than 500 workers are ordinarily employed for such work one additional Safety Officer shall be employed. If the number of workers ordinarily employed in such jobs exceeds 1,000, Additional Safety Officer shall be employed in accordance with the provision of sub-rule 5(a).(6)Exemption.-The State Government may by notification in the official gazette exempt any factory or class or description of factories from all or any of the provisions of these Rules subject to compliance with such alternative arrangements as may be approved.(7)Facilities to be provided.-An occupier of the factory shall provide equipments, office staff, library, books, safety journals and periodicals and such other facilities as are necessary to enable him to discharge his duties effectively.(8)Prohibition of performance of other duties.-No Safety Officer, shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of the duties prescribed in sub-rule (4)]

62C. [Safety Committee. [Inserted by Notification. No. 2/Fl-103/88 L&B 47 dated 9.2.1992.]

-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 of Safety Committee shall include:-(a)A senior official, who by his 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 the Safety Officer in such a case shall be the Secretary of the Committee;(c)A representative each from the production, maintenance and purchase departments.(3)The workers' representatives in this committee shall be elected by the workers.(4)The tenure of the Committee shall be two years.(5)Safety Committee shall meet as often as necessary but atleast once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector on demand.(6)Safety Committee shall have the right to:-(a)ask for necessary information concerning health and safety of the workers,(b)Seek any relevant information concerning 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 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 problems encountered;(c)creating safety awareness amongst all workers;(d)undertaking educational, training and promotional activities;(e)deliberating on reports of safety environmental and occupational health surveys, emergency plans, safety audits, risk assessment and implementation of the recommendations made in the reports;(f)carrying out health and safety surveys and to identify causes of accidents;(g)looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggest corrective measures; and(h)reviewing the implementation of the recommendations made by it.(8)where owing to the size of the factory, or any other reason, the functions referred to in sub-rule (7) cannot be effectively carried out by the Safety Committee, it may establish sub-committees as may be required to assist it.[Chapter IV-A] [Inserted by Notification. No. 2/F1-103/88 L & E 47 dated 9.2.1992.]

62.

-AH. Site Appraisal Committee.- Rules prescribed under sub-section (1) of Section 41 A-(1) The following provisions shall govern the functioning of the Site Appraisal Committee, hereinafter referred to as the "Committee" in these rules:(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 Inspectorate, preferably with qualification in Chemical Engineering to be the Secretary of the committee;(c)The State Government may appoint the following as members of the Committee:-(i)A representative of the Fire Service Organisation of the State Government;(ii)A representative of the State Department of Industries:(iii)A representative of the Director General of Factory Advice Service and Labour Institutes, Bombay.(2)No member, unless required to do so by a Court of Law, shall disclose otherwise than in connection with the purposes of the Act, at any time any information relating to manufacturing of commercial business or any working process which may come to his knowledge during his tenure as a Member of the Committee.(3)Applications for appraisal of sites:-(a)Applications 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 State Appraisal Committee.(b)The application for site appraisal alongwith 15 copies thereof shall be submitted in the Form 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 consecration.(4)Functions

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.(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 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 of the location of industry and the carrying on of processes and operations in different areas as per the provisions of Rule 5 of the Environment (Protection) Rules, 1986 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 a clearance by the Ministry of Industry 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.Format Of Application to the Site Appraisal Committee

1. Name and address of the applicant:

2. Site ownership data:

2.1Revenue details of site such as Survey no. Plot no. etc.2.2Whether 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.2.3Whether the proposed site attracts the provisions of section 3 (2) (v) of the E.P. Act, 1986, if so, the nature of the restrictions.2.4Local authority under whose jurisdiction the site is located.

3. Site plan:

3.1Site 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 habitants, educational and training institutions, petrol installations, 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, pipe lines for water, oil, gas or sewerage, railway lines, roads, stations, jatties and other similar installations.3.2Details of soil conditions and depth of which hard strarta obtained.3.3Contour map of the area showing nearby hillocks and difference in levels.3.4Plot plant of the factory showing the entry and exit points, roads within, water drains etc.

4. Project Report:

4.1A summary of the salient features of the Project.4.2Status of the organisation (Government, semi-Government, Public or Private etc.)4.3Maximum number of person likely to be working in the

factory.4.4Maximum amount of power and water requirements and source of their supply.4.5Block diagram of the buildings and installations in the proposed supply.4.6Details of housing colony, Hospital, School, and other infrastructural facilities proposed.

5. Organisation structure of the proposed manufacturing Unit Factory.

5.1organisation diagrams of-Proposed enterprise in general-Health Safety and Environment protection departments and their linkage to operation and technical departments.5.2Proposed Health and Safety policy.5.3Area allocated for treatment of wastes and effluent.5.4Percentage outlay on safety, health and environment protection measures.

6. Meteorological data relating to the site:

6.1Average, minimum and maximum of-Temperature-Humidity-Wind velocitiesduring the previous ten years.6.2Seasonal variations of wind direction.6.3Highest water level reached during the floods in the area recorded so far.6.4Lightening and seismic data of the area.

7. Communication Links:

7.1Availability of telephone/telex/wireless and other Communication facilities for outside communication.7.2Internal Communication facilities proposed.

8. Manufacturing process Information:

8.1Process flow diagram.8.2Brief write up on process and technology.8.3Critical process per meters such as pressure build up, temperature rise and runaway reactions.8.4Other external effects critical to the process having safety implications, such as ingress of moisture or water, contact with incompatible substances, sudden power failure.8.5Highlights of the build in safety/pollution control devices or measures/incorporated in the manufacturing technology. .

9. Information of Hazardous materials:

9.1Raw materials, intermediates, products and by-products and their quantities (Enclose Materials Safety Data Sheet in respect of each hazardous substance).9.2Main and intermediate storages proposed for raw materials, intermediate/products/by-products (maximum quantities to be stores at any time).9.3Transportation methods to be used for materials inflow and outflow their quantities and likely routes to be followed.9.4Safety measures proposed for:-Handling of materials-Internal and external transportation, and-Disposal (packing and forwarding of finished products)

10. Information on Dispersal/Disposal of waters and pollutants.

10.1Major pollutant (gas, liquid, solid, their characteristics and quantities (average and at peak loads).10.2Quality and quantity of solid wastes generated, method of their treatment and

disposal.10.3Air, water and Soil pollution problems anticipated and the proposed measures to control the same, including treatment and disposal of effluents.

11. Process Hazards information.

11.1Enclose a copy of the report on environmental impact assessment.11.2Enclose a copy of the report on Risk Assessment study.11.3Published (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.

12.1Details of fire fighting facilities and minimum quantity of water, CO and/or other fire fighting measures needed to meet the emergencies.12.2Details of in-house medical facilities proposed.

13. Information on Emergency preparedness.

13.1Proposed 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 concealed while furnishing it.Name and Signature of the Applicant.

62BH. Health and Safety policy.

(1)Occupier of every factory, except as provided for in sub-rule (2), shall prepare a written report of his policy in respect of health and safety of workers at work.(2)All factories-(a)Covered under section 2(m)(i) but employing less than 50 workers;(b)covered under section 2(m)(ii) but employing less than 100 workers, are exempted from requirements of sub-rule (1):Provided that they are not covered in the First Schedule under Section 2(c) or carrying out processes or operations declared to be dangerous under Section 87 of the Act.(3)Notwithstanding anything contained in sub-rule (2), the Chief Inspector may require, the Occupiers of any of the factories or class or description of factories to comply with the requirements of sub-rule (1) if, in his opinion, it is expedient to do so.(4)The Health and Safety policy should contain or deal with:(a)declared intention and commitment of the top management to health, safety and environment and compliance with all the relevant statutory requirements;(b)organisational set up to carry out the declared policy clearly assigning the responsibility at different levels; and(c)arrangements for making the policy effective.(5)In particular, the policy should specify the following:(a)arrangements for involving the workers;(b)intention of taking into account the health and safety performance of individuals at different levels while considering their career advancement;(c)fixing the responsibility of the contractors, sub-contractors, transporters and other agencies entering the premises;(d)providing a resume of health and safety performance of the factory in its Annual Report;(e)relevant techniques and methods, such as safety, audit and risk assessment for periodical assessment of the status on

health, safety and environment and taking all the remedical measures;(f)stating its intention to integrate health and safety in all decisions including those dealing with purchase of plant, equipment, machinery and material as well as selection and placement of personnel;(g)arrangement for informing, educating and training and retraining its own employees at different levels and the public, wherever required.(6)A copy of the declared Health and Safety Policy signed by the Occupier shall be made available to the Inspector having jurisdiction over the factory and to -he Chief Inspector.(7)The Policy shall be made widely known by-(a)making copies available to all workers including contract workers, apprentices, transport workers, suppliers etc;(b)displaying copies of the policy at conspicuous places; and(c)any other means of communication;in a language understood by majority of workers.(8)The Occupier shall revise the Safety Policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances;-(a)Whenever any expansion or modification as approved by the Chief Inspector of Factories, having implications of safety and health of persons at work, is made; or(b)Whenever new substance or articles are introduced duly approved by the Chief Inspector of Factories in the manufacturing process having implications on health and safety of persons exposed to such substances.

62CH. Collection and development and dissemination of information.

- (i) The occupier of every factory carrying on a hazardous process shall arrange to obtain or develop information in the form of Material Safety Data Sheet (MSDS) in respect of every hazardous substance or material handled in the manufacture, transportation and storage in factory. It shall be accessible upon request to a worker for reference.Material Safety Data Sheet-(a) Every such Material Safety Data Sheet shall include the following information-(i)The identity used on the label;(ii)Hazardous ingredients of the substance;(iii)Physical and chemical characteristics of the hazardous substance;(iv)The physical hazards of the hazardous substance;(v)The health hazards of the hazardous substance, including sign and symptoms of exposure, and any medical conditions which are generally recognised as being aggravated by exposure to the substance;(vi)The primary route(s) entry;(vii)The permissible limits of exposure prescribed in the second schedule under Section 41-F of the Act and in respect of a chemical not covered by the said schedule, any exposure limit used or recommended by the manufacturer, importer or occupier;(viii)Any generally applicable precautions for safe handling and use of the hazardous substance, which are known, including appropriate hygienic practices, protective measures during repairs and maintenance of contaminated equipment procedures for clean-up of spills and leaks;(ix)Any generally applicable control measures such as appropriate engineering, controls, work practices, or use of personal protective equipment;(x)Emergency and first aid procedures;(xi)The date of preparation of the Materials Safety Data Sheet, or the last change to it; and(xii)(a)The name, address and telephone number of the manufacturer importer, occupier or other responsible party preparing or distributing the Material Safety Data Sheet, who can provide additional information on the hazardous substance and appropriate emergency procedures, if necessary.(b)The occupier while obtaining or developing a Material Safety Data Sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If he becomes newly aware of any significant information regarding the hazardous of a substance, or ways to protect against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable.(c)An example of such Material Safety Data Sheet is given in the Schedule to

this Rule.Labelling-(a) Every container of a hazardous; substance shall be clearly labelled or marked to identify:-(a)The contents of the container;(b)the name and address of the manufacturer or importer of the hazardous substance.;(c)the physical and health hazards; and(d)the recommended personal protective equipment needed to work safety with the hazardous substance.(b)In case a container is required to be transported by road outside the factory premises it should in addition be labelled or marked in accordance with the requirements laid down under Rule 62-LH.

62DH. Disclosure of information to workers.

(1)The occupier of factory carrying on a 'hazardous process' shall supply to all workers the following information in relation to handling of hazardous materials or substances in the manufacture, transportation, storage and 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 62 CH;(d)Physical and health hazards arising from the exposure to or handling of substances;(e)Measures taken by the occupier to ensure safety and control of physical and health hazards;(f)Measures to be taken by the workers to ensure safe handling, storage and transportation of hazardous substances;(g)Personal Protective Equipment required to be used by workers employed in 'hazardous process' or dangerous operations;(h)Meaning of various labels and marking used on the containers of hazardous substances as provided under Rule 62-CH:(i)Signs and symptoms likely to be manifested on exposure to hazardous substances and to whom to report;(j)Measures to be taken by the workers in case of any spillege or leakage of a hazardous substances;(k)Rule for workers vis-a-vis the emergency plan of the factory, in particular the evacuation procedures;(l)Any other information considered necessary by the occupier to ensure Safety and Health of workers.(2)The information required by sub-rule (1) shall be compiled and made known to workers individually through supply of booklets or leaflet 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 also explained to them.(4)The Chief Inspector may direct the occupier to supply further information to the workers as deemed necessary.

62EH. Disclosure of information to general public.

(1)The occupier of every factory carrying on a 'hazardous process' shall in consultation with the District Emergency Authority designated by the State Government, take appropriate steps to inform the general public who are likely to be in the area which might be affected by an accident such information shall include:(a)Name of the factory and address where situated;(b)Identification by name and position, of the person giving the information;(c)Confirmation that the factory has approval from the Factories Inspectorate and Pollution Control Board;(d)An explanation in simple terms of the hazardous process(s) carried on in the premises;(e)The common names of the hazardous substances used which could give rise to an accident likely to affect them with an indication of their principal harmful characteristics;(f)Brief description of the measures to be taken to minimise the risk of such an accident in compliance with its legal obligations under relevant safety statutes;(g)Salient features of the approved disaster control measures adopted in the factory;(h)Details of the factory's emergency warning system for the General Public;(i)General

advice on the action, members of the public should take on hearing the warning;(j)Brief description of arrangements in the factory, including liason with the emergency services, to deal with foreceable accidents of such nature and to minimise their effects; and(k)Details of where further information can be obtained.(2)The occupier shall also supply any further information-(a)to general public as directed by the Emergency Planning Officer from time to time:(b)to the elected representatives of the general public on request.(3)The Occupier shall endeavour to enter an agreement with the Emergency Planning Officer for the area, within whose jurisdiction the factory is situated, for the Emergency Planning Officer to take appropriate steps to inform the general public outside the factory who are likely to be affected by an accident as required in sub-rule (1).(4)The information prescribed in sub-rule (1) shall be in the regional language and in English or Hindi.

62FH. Disclosure of information to the local authority.

- The occupier of every factory carrying on a 'hazardous process' shall furnish the following information in writing to the local authority having jurisdiction over the area in which the factory is situated:-(a)the information furnished to general public as prescribed in Rule 62 EH:(b)a statement of the names and quantities generally stored or in process of hazardous substances included in the list of chemicals prescribed under clauses (vi) and (vii) of sub-section (2) of Section 3 of the Environment (Protection) Act, 1986.

62GH. Disclosure of information to District Emergency Authority.

- The occupier of a factory carrying on a hazardous process, shall intimate the District Emergency Authority designated by the State Government, all information having an bearing on preparation of an on site emergency plan and a disaster control and management plan in respect of the factory.Without prejudice to the generality of this clause, the occupier shall furnish to the District Emergency Authority the following:-(a)a report on status relating to risk assessment and environmental impact assessment and the measures taken for prevention of accidents;(b)completion of Material Data Sheets in respect of hazardous substances used, produced or stored in the factory;(c)a statement on all possible sources of accidents involving fire, explosion, release or leakage of toxic substances and the plan of the premises where such an accident may occur;(d)a statement on resources and facilities available for dealing with an emergency including any agreement entered into with a neighbouring factory for aid and assistance in the event of an emergency;(e)a map of the area showing the approached to the factory, location of emergency facilities such as hospitals, police, fire service;(f)the organisation of the management and the responsibility for safety indicating therein the persons responsible for on-site emergency action;(g)details relating to alert system;(h)information on availability of antidotes for poisoning resulting from an accident;(i)any other information as may be considered relevant by the occupier or asked for by the District Emergency Authority,

62HH. Disclosure of information to the Chief Inspector.

(1)The Occupier of every factory carrying on hazardous process shall furnish, in writing to the Chief Inspector a copy of all the information furnished to the workers, local authority, general public and

the District Emergency Authority.(2)A copy of compilation of Material Safety Data Sheet in respect of hazardous substances used, produced or stored in the factory shall be furnished to the Chief inspector, and the local inspection.(3)The occupier shall also furnish any other information asked for by the Chief Inspector from time to time for the purpose of this Act and Rules made thereunder.

62IH. Emergency Plan.

(1)The Occupier of a factory carrying on a hazardous process shall prepare a draft on-side emergency plan and submit it to the Chief Inspector. The Chief Inspector may make such modifications in the plan as necessary in consultation with the occupier and approve the same.(2)The Occupier will submit a copy of the approved plan to the District Emergency Authority.(3)The occupier will intimate the workers the provisions of the emergency plan and-held rehearsals of the plan periodically. He shall review the plan from time to time and make necessary changes therein under information to the Chief Inspector and the District Emergency Authority.(4)The Chief Inspector may issue guidelines relating to formulation of emergency plans. He may also direct modifications of the emergency plan in respect of any factory as may be necessary, from time to time.

62JH. Disaster Control and Management Plan.

(1)The occupier of every factory carrying on a hazardous process, shall prepare a draft disaster control and management plan in respect of his factory and submit the same to the Chief Inspector and the District Emergency Authority.(2)The District Emergency Authority on receipt of the plan shall hold consultation with the occupier, representatives of the Chief Inspector, local authority as well as police, health, fire brigade and other authorities concerned and finalise the plan.(3)The District Emergency Authority shall forward a copy of the final plan to the occupier and all authorities concerned. The occupier shall intimate the workers the contents of the plan.(4)The occupier in consultation with the District Emergency Authority will arrange rehearsals of the plan at least once a year.(5)The Chief Inspector may issue guidelines for formulation of disaster control and management plans. The Chief inspector as well as the District Emergency Authority in consultation with the Chief Inspector may also direct modifications of the disaster control and management plan in respect of a factory as may be necessary from time to time.

62KH. Information on industrial wastes.

(1)The information furnished under Rules 62.DH, 62-FH, 62-GH and 62-HH shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes and 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 similar such arrangements 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 Board.

62LH. Review of the information furnished to workers, etc.

(1)The occupier shall review once in every calendar year and modify, if necessary, the information furnished under Rules 62-DH to 62-HH to the workers, general public, local authority, Chief Inspector and the District Emergency Authority.(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.

62MH. Confidentiality of information.

- The occupier of a factory carrying on hazardous process shall disclose all information needed for protecting safety and health of the workers and the general public in the neighbourhood to-(a)his workers;(b)the Chief Inspector, and(c)District Emergency Authority,as required under Rules 62-DH, 62-GH, 62-HH. If the occupier is of the opinion that the disclosure of details regarding the process and formation, will adversely affect his business interests, he may make a representation to the Chief Inspector stating the reasons for withholding such information. The Chief Inspector shall give an opportunity to the occupier of being heard and pass an order on the representation.An occupier aggrieved by an order of Chief Inspector, may prefer an appeal before the State Government within a period of 30 days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final.

62NH. Medical Examination.

(1)Workers 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 physical fitness of the person to do the particular job;(b)Once in a period of 6 months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter interval in respect of any worker;(c)The details of pre employment and periodical medical examination carried out as aforesaid shall be recorded in the Health Register in Form 24.(2)No person shall be employed for the first time without a certificate of Fitness in Form 33 granted by the Factory Medical Officer. If the Factory Medical Officer declares a person that for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the Inspector who shall refer the matter to the certifying Surgeon whose opinion shall be final in this regard, if the Inspector himself is also a certifying Surgeon, he may dispose of the application himself.(3)Any findings 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 who shall in turn, examine the concerned worker and communicate his findings to the occupier within 30 days, If the Certifying Surgeon is of the opinion that the worker so examined is required to be taken away from the process for health protection he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away be provided with alternate placement unless he is fully incapacitated, in the opinion of the Certifying Surgeon, in which case the worker affected shall be suitably

rehabilitated:Provided that the Certifying Surgeon on his own may examine any worker when he considers it necessary to do so for ascertaining the suitability of his employment in the 'hazardous process' or for ascertaining the health status of any worker.(4)The worker taken away from employment in any process under sub-rule (2) may be employed again in the same process only after obtaining the fitness certificate from the Certifying Surgeon and after making entry to that effect in the Health Register.(5)An Inspector may, if he deems it necessary to do so refer worker to the Certifying Surgeon for medical examination as required under sub-rule (1) or if he is a Certifying Surgeon himself conduct such medical examination. The opinion of the certifying Surgeon in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.(6)The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not undergo such medical examination.

62OH. Occupational Health Centres.

(1)In respect of any factory carrying on 'hazardous process' there shall be provided and maintained in good order an occupational Health Centre with the services and facilities as per scale laid down hereunder-(a)For factories employing up to 50 workers:-(i)the services of a factory Medical Officer on retainership basis, in his clinic to be notified by the occupier. He will carry out pre-employment and periodical Medical examination as stipulated in Rule 62 NH and render medical assistance during any emergency.(ii)a minimum of 5 persons trained in first aid procedures amongst whom at least one shall always be available during the working period;(iii)a fully equipped first-aid box.(b)For factories employing 51 to 200 workers:-(i)an occupational Health Centre having a room with a minimum floor area of 15 sq. m. with floors and walls made of smooth and impervious surface and with adequate illumination and ventilation as well as equipment as per the schedule annexed to this Rule;(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 medical emergencies;(iii)one qualified and trained dresser-cum-compounder on duty throughout the working period;(iv)a fully equipped first-aid box in all departments.(c)For factories employing above 200 workers:-(i)One full-time Factory Medical Officer for factories employing up to 500 workers and one more medical officer for every additional 1000 workers or. part thereof;(ii)An occupational Health Centre having at least 2 rooms with a minimum floor area of 15 sq. m. with floors and walls made of smooth and impervious surface and adequate illuminations and ventilation as well as equipment as per the schedule annexed to this Rule;(iii)There shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period;(iv)the occupational Health Centre shall be suitably equipped to manage medical emergencies.(2)The Factory Medical Officer required to be appointed under sub-rule (1) shall have qualification included in Schedules to the Indian Medical Degrees Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and possess certificate of Training in Industrial Health of minimum three months duration 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 three years on the date of commencement of this rule, the Chief Inspector may, subject to the condition that the said person shall obtain the aforesaid certificate of training within a period of three years, relax the qualification.(3)The syllabus of the course lending to the above certificate, and the organisations conducting the State Course shall be approved by the D.G. FASLI or the Government in accordance with the guidelines issued by the D.G. FASLI.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.

62PH. Ambulance Van.

(1)In any factory carrying on '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 other than the purpose stipulated herein and will normally be stationed at or near to the Occupation Health Centre:Provided that a factory employing less than 200 workers, may make arrangements for procuring such facility at short notice from nearby hospital or other places, to meet any emergency.(2)The Ambulance should have the following equipments:(a)General:A wheeled stretcher with folding and adjusting devices with the head of the Stretcher capable of being titled upward;Fixed suction unit with equipment;Fixed Oxygen supply with equipment;Pilow with Case, Sheets, Blankets, Towels, Emesis beg, Bed pan, Urinal, Glass.(b)Safety equipments:Flares with life of 30 minutes-Flood lights.Flash lights-Fire extinguisher dry powder type;Insulated agauntlets.(c)Emergency care equipment:(i)Resuscitations:Portable Suction Unit; Portable Oxygen Units;Bag-valve-mask, hand operated artificial ventilation unit;Airways, Mouth gage, Tracheestomy adopters;Short spine board; I.V. Fluids with administration unit;B.P. manometer, Stethoscope.(ii)Immobilization:Long short padded boards-Wire ladder splints;Triangular bandage-Long and short spine boards.(iii)Dressings:Gauze pads-4" x 4",- Universal dressing 10" x 36",Roll of aluminium foils soft roller bandages 6" x 5"Yeards, Adhesive tape in 3" roll-Safety pins;Bandage Sheets, Burn Sheet.(iv)Poisoning;Syrup of Ipacase, Activated Charcoal prepacketed in doses, Snake bite kit;Drinking Water.(v)Emergency Medicines:-As per requirement-(under the advice of Medical Officer only.)

62QH. Decontamination facilities.

- In every factory carrying out 'hazard-process, the following provisions shall be made to meet emergency.-(a)fully equipped first-aid box;(b)readily accessible means of drenching with water:-(i)workers;(ii)parts of body of workers; and(iii)clothing of workers which have been contaminated with hazardous and corresive substance; and with such means shall be as per the ,scale shown in the Table below:-Table

No. of persons employed at anytime	No. of drenching showers.

(i)	Upto 50 workers ...	2
(ii)	Between 51 to 200 workers ...	2+1 for every additional 50 or part thereafter.
(iii)	Between 201 to 500 workers ...	5+1 for every additional 100 or part thereafter.
(iv)	501 workers and above...	8+1 for every additional 200 or part thereafter.

(c)a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which be visible at all times.

62RH. Making available Health Records to workers.

(1)The occupier of every factory carrying out 'hazardous process' shall make accessible the health records including the record of workers' exposure to hazardous process or as the case may be, the medical records of any worker for his perusal under the following conditions:-(a)One in every 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 of the following authorities so direct;-the Chief Inspector of Factories;-the Health Authority of the Central or State Government;-Commissioner of Workmen's Compensation;-The Director General, Employees State Insurance Corporation;-The Director Employees State Insurance Corporation (Medical Benefits); and-The Director General, Factory Advice Service and Labour Institutes.(2)A copy of the up-to-date health records including the record 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.

62SH. Qualifications, etc., of Supervisors.

(1)All persons who are required to supervise the handling of hazardous substances shall possess the following qualification and experience:(a)(i)A degree in Chemistry or Diploma in Chemical Engineering or Technology with 5 years experience; or(ii)A Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with 5 years, experience.The experience stipulated above shall be process operation and maintenance in the Chemical Industry.(b)The Chief Inspector may require the Supervisor to undergo training in Health and Safety.(2)The Syllabus and duration of the above training and the organisations conducting the training shall be approved by the D.G.FASLI or the State Government in accordance with the guidelines issued by the D.G.FASLI.

62TH. Issue of guidelines.

- For the purpose of compliance with the requirements of sub-sections (1), (4) and (7) of Section 41-B or 41-C the Chief Inspector may, if deemed necessary, issue guidelines from time to time to the

occupiers of factories carrying on 'hazardous process'. Such guidelines may be based on National Standard Codes of practice, or recommendations of International Bodies such as ILO and WHO.

I (Rule 62-CH)

(Material Safety Data Sheet)

MATERIAL SAFETY DATASHEETSAMPLE MODELSECTION-I-MATERIAL IDENTIFICATION AND USE				
Material Name/Identifier				
Manufacturer's Name	Supplier's Name			
Street Address	Street Address			
City	Province	City	Province	
Postal Code	Emergency Telephone No.	Postal Code	Emergency Telephone No.	
Chemical Name	Chemical Identity			
Trade Name and Synonyms	Product Use			
SECTION-II-HAZARDOUS INGREDIENTS OF MATERIAL				
Hazardous Ingredients	Approximate Concentration %	C.A.S. or UN numbers	LD. 50 (Specify Species & Route)	LC. 50 (Specify Species & Route).
SECTION-III-PHYSICAL DATA FOR MATERIAL				
Physical State.....Gas .....Liquid.....Solid	Odour-appearance	Odour-Threshold (P.P.M)	Specific Gravity.	
Vapour Pressure (mm)	Vapour density (Air-I)	Evaporation Rate	Boiling point (°C)	Freezing (°C)
Solubility in water (20°C)	Hp	Density (g/m)	Coefficient of water oil Distribution.	
SECTION IV-FIRE AND EXPLOSION HAZARD OF MATERIAL				
Flammability....Yes ... No. If yes, under what conditions.				
Means of Extinction.				

Special procedures

Flash point (°C) and Method	Upper Explosion Limit (% by Volume)	Lower Explosion (Limit (% by Volume)	
Auto-ignition Temperature (°C)	TDG Flammability	Hazardous Combustion products	
Explosion Date-	Sensitivity to Chemical	Impact	Sensitivity to Static Discharge

SECTION V-REACTIVITY DATA

Chemical Stability.....Yes .....No. If no, under what conditions.

Incompatibility to other substances

Yes ... No. If no, under what conditions.

Reactivity and under what conditions

Hazardous Decomposition products

MaterialName/Identifier

SECTION VI-TOXICOLOGICAL PROPERTIES OF MATERIAL

Route of Entry.....Skin Contact.....Skin Absorption.....
Eye Contact.---------Inhalation
Acute---------
inhalationChronic----------
Ingestion_____

Effects of Acute Exposure to Material

Effects of Chronic Exposure to Material

66

Irritency of Material

Sensitization to Material

Synorgistic Materials

SECTION VII-PREVENTIVE MEASURES

PERSONAL PROTECTIVE

EQUIPMENT		
Gloves (Specify)	Respiratory (Specify)	Eyes (Specify)
Footwear (Specify)	Clothing (Specify)	Other (Specify)
Engineering Controls (e.g.ventilation, enclosed process, etc.)Please Specify.		
Leak and spill procedures		
Waste Disposal		
Handling Procedures and Equipment		
Storage Requirements Information		
Special Shipping Information		
SECTION VIII-FIRST-AID MEASURES		
First-aid Measures		
Sources used		
Additional Information		
SECTION IX-PREPARATION DEPTT. OF M. D. A.]		
Prepared by (Group Department, etc.)	Phone. No.	State

Note-1. CAS or UN Number Chemical Abstract Service or United Nations (UN) Number.

2. L.D. 50-Lethal Doze-50% (LD 50-Specify species & route)

3. LC 50 Lethal Concentration-50% (LC-50 Specify Species & route)

4. TDG Flammability-Transport of Dangerous Goods Flammability Classification by United Nations.

II

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 kattle and spirit stove or other suitable means of boiling water

7. One bottle of spiritus ammoniac aromatious (120 ml.)

8. Two medium size sponges

9. Two 'Kidney' trays

10. Paurakes of toilet, preferably antiseptic scop

11. Two clinical thermometers

12. Two glass tumblers and two wing glasses

13. Two tea spoons

14. Two graduated (12 ml.) measuring glasses

15. One wash bottle (1000 cc) for washing eyes

16. One bottle (one litre) carbolic lotion 1 in 20

17. Three chairs

18. One screen

19. One electric hand torch

20. An adequate supply of tetanus toxied

21. Coramine liquid (60 ml.)

22. Tablets-antihistaminic, antispasmodic (25 each)

23. Syringes with needles-2cc, 5cc and 10cc

24. Two needle holders, big and small

25. Suturing needles and materials

26. One dissecting forceps

27. One dressing forceps

28. One scapels

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 employing 51 to 200 workers.-

1. Four plain wooden splints 900 mm x 100 mm x 6 mm.

2. Four plain wooden splints 350 mm x 75 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, novocain (2 each).

6. One surgical scissors.

(2)For factories employing above 200 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. novocain (4 each).

6. Two surgical scissors.

Chapter V
Welfare

63. 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 two feet, or(b)wash-basins with taps attached thereto, or(c)taps on stand-pipes, or(d)showers controlled by taps, or(e)circular trough 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, tapjet, wash-basin, stand-pipe and shower shall be so laid or finished as to provide a

smooth impervious surface and shall be adequately drained.(4)For person whose work involves contact with any injurious or noxious substance there shall be at least one tap for every fifteen persons working at any time in the factory and for persons whose work does not involve such contact, the numbers of taps shall be as follows:-

No. of workers-working at any one time	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 ever 50 or fraction of 50.
Exceeding 500	11 plus one tap for every 100 or 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 six gallons a day for each person employed in the factory and shall be from a source approved in writing by the Health Officer:Provided that where the Chief Inspector is satisfied that such an yield is not practicable he may by certificate in writing permit the supply of a smaller quantity not being less than one gallon per day for every person employed in the factory.

63A. Facilities for storing and drying of clothings.

(1)In such parts of every factory in which any of the operations or processes specified in the Schedule hereto annexed is carried on, adequate number of pegs, racks and similar facilities, for hanging and keeping of clothings shall be provided for the use of workers.(2)The Inspector may direct the manager or the occupier of any factory to provide such additional pegs, racks and similar facilities and at such places, as he may consider necessary and convenient and he may specify the time within which the direction shall be carried out.(3)(a)The Chief Inspector may direct the manager or the occupier of any factory to provide such cloak-rooms, lockers, pegs and such other facilities for the use of the workers for drying and storing of clothings, as he may consider necessary and may specify the time within which the direction shall be carried out.(b)Where a direction under clause (a) has been given the manager or the occupier, as the case may be, shall submit the details in respect of the site and plans elevations and necessary cross-section of the cloak room and full details of other facilities to be provided to the Chief Inspector for approval within the time specified.(c)The Chief Inspector may approve the details and the plans, subject to such conditions as he may specify, and the cloak room and other facilities shall be provided in accordance with the plans and details as

approved by the Chief Inspector, and within the time specified.(4)These rules shall be without any prejudice to any rules framed under Section 87.

Schedule 14

1. Manufacture of glass articles.

2. Manufacture of rubber or rubber goods or any other process in which rubber is used.

3. Repairs, servicing and painting of Automobiles.

4. Processes carried out in foundaries.

5. Processes of and connected with dressing, packing and tanning of hides and skins.

6. Processes using lead compounds.

7. Manufacture of Iron and Steel.

8. Manufacture of Potteries.

9. Manufacture of Refractory materials.

10. Electro-plating.

11. Operation of Boilers.

12. Operation of Coal Handling plants.

13. Manufacture of chemicals.

64. Firs-aid appliance.

- The first-aid boxes or cup-boards shall be distinctively marked with a red cross on a white ground and shall contain the following equipments, namely:-(A)For factories in which the number of persons employed does not exceed ten (or in case of factories in which mechanical power is not used) does not exceed fifty persons. Each first-aid box or cup-board shall contain the following equipments:-(i)Six small size sterilized dressings;(ii)Three medium size sterilized dressings;(iii)Three large size sterilized dressings;(iv)Three large size sterilized burn dressings;(v)One (60 ml.) bottle of cetrimide solution (1 per cent) or a suitable antiseptic

solution;(vi)One (60 ml.) bottle of mercurochrome solution (2 per cent) in water;(vii)One (30 ml.) bottle containing salvolatile having the dose and mode of administration indicated in the label;(viii)A snake-bite lancet;(ix)One (30 ml.) bottle containing potassium permanganate crystals;(x)One pair of scissors;(xi)One roll of adhesive plaster (2 cm. x 1 metre);(xii)Six pieces of sterilized eye pads in separate sealed packets;(xiii)A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic;(xiv)One polythene wash bottle (1/2 litre i.e. 500 c.c.) for washing eye;(xv)One copy of first-aid leaflet issued by the Chief Inspector of Factories, Bihar; and(xvi)A foolscap size bound register for maintaining the record of first-aid cases.(B)For factories in which mechanical power is used in which the number of persons employed exceeds ten but does not exceed fifty-Each first-aid box or cup-board shall contain the following equipments:-(i)Twelve small size sterilized dressings;(ii)Six medium size sterilized dressings;(iii)Six large size sterilized dressings;(iv)Six large size sterilized burn dressings;(v)Six 15 gm. packets of sterilized cotton wool;(vi)One (120 ml.) bottle of cetrimide solution (1 per cent) or a suitable antiseptic solutions;(vii)One (60 ml.) bottle of mercurochrome solution (2 per cent) in water;(viii)One (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label;(ix)Snake bite lancet;(x)One (30 ml.) bottle containing potassium permanganate crystals;(xi)One pair of scissors;(xii)Two rolls of adhesive plaster (2 c.m. x 1 metre);(xiii)Eight pieces of sterilized eye pads in separate sealed packets;(xiv)One tourniquet;(xv)One dozen safety pins;(xvi)A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic;(xvii)One polythene wash bottle (½) litre i.e. 500 c.c.) for washing eyes;(xviii)One copy of first-aid leaflet issued by the Chief Inspector of Factories, Bihar; and(xix)A foolscap size bound register for maintaining the record of first aid cases.(C)For factories employing more than fifty persons each first-aid box or cupboard shall contain the following equipments:-(i)Twenty-four small size sterilized dressings;(ii)Twelve medium size sterilized dressings;(iii)Twelve large size sterilized dressings;(iv)Twelve large size sterilized burn dressings;(v)Twelve (15 gm.) packets of sterilized cotton wool;(vi)One (200 ml.) bottle of cetrimide solution (1 per cent) or a suitable antiseptic solution;(vii)One (200 mi.) bottle of mercurochrome (2 per cent) solution in water;(viii)One (200 ml.) bottle of salvelatile having the dose and mode of administration indicated on the label;(ix)One pair of scissors;(x)Two rolls of adhesive plaster (6 cms. x 1 metre);(xi)Two rolls of adhesive plaster (2 cms. x I metre);(xii)Twelve pieces of sterilized eye pads in separate sealed packets;(xiii)A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic;(xiv)One polythene wash bottle (500 c.c.) for washing eyes;(xv)Twelve roller bandages 10 cms. wide;(xvi)Twelve roller bandages 5 cms. 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)First-aid leaflet issued by the Chief Inspector of Factories, Bihar; and(xxv)A foolscap size bound register for maintaining the record of first-aid cases;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 are placed and maintained in accordance with the requirements of Section 45 is separately provided.(D)In lieu of the dressings required under items (i) and (ii) there may be substituted adhesive wound dressings approved by the Chief Inspector of Factories,Bihar and other equipments or medicines that may be considered essential and recommended by the Chief Inspector of Factories, Bihar from time to time,(E)NoTice regarding first aid.-A notice containing the names of the persons working within the precincts of the factory who are trained in first-aid

treatment and who are incharge of the first-aid boxes or cupboards shall be pasted in every factory at a conspicuous place and near each such box or cupboard. The notice shall also indicate workroom where the said person shall be available. The names of the nearest hospital and its telephone number shall also be mentioned prominently in the notice.(F)Without prejudice to the generality of the provision of sub-section (3) of Section 45, every first-aid box or cupboard shall be kept under the charge of a person who is trained in first-aid treatment and has a certificate of proficiency in the said treatment granted by any of the following authorities or persons, namely:-(a)St. John's Ambulance Association;(b)Civil Surgeon:(c)Certifying Surgeon appointed under sub-section (1) of Section 10 of the Act;(d)Medical Officer-incharge of the Ambulance Room of the factory in which the said person is for the time being employed; or(e)Medical Inspector of Factories appointed under Section 8 of the Act:Provided that the Chief Inspector may, by an order in writing, authorise any other registered Medical Practitioner to grant the said certificate in respect of persons employed in any particular factory:Provided further that the Chief Inspector may at any time withdraw and revoke the said order:Provided also that the Medical Inspector of Factories, may as and when he may so desire or consider necessary, or as directed by the Chief Inspector, carry out such tests or examinations of any person under whose charge any first-aid box or cupboard has been kept, as he may deem necessary to assess his proficiency in first-aid treatment and may by a written order cancel and nullify the certificate already granted to him by any other authority in which case the said person shall be deemed not to have any certificate of training in first-aid treatment.(G)If there is an ambulance room in a factory according to rule 65, the Chief Inspector of Factories may grant exemption from certain requirements of rule 64 to that factory by a written order subject to the condition that in place of necessary facilities as required under rule 64, such other facilities may be given or such other arrangement may be made which he thinks fit. This exemption may be granted for a prescribed period and may be revoked or cancelled at any time by a written order by the Chief Inspector of Factories served on the occupier of the factory.

64A.

In every factory, wherein the maximum number of workers (taking all the shifts and relays' into account) employed on any one day in the preceding twelve months is 50 or more, the following equipments and articles in addition to the medicines, equipments and articles prescribed in rule 64 shall, be provided and maintained in such a manner and condition and at such a place, as to be readily available at any moment for removing workers injured in any accident or who may be sick to an ambulance room, dispensary or a hospital namely:-Stretcher-2;Blanket-2:Provided that this rule shall not apply to the factories to which rule 65 is applicable.

65. Ambulance Room.

(1)Every ambulance room or dispensary shall be under the charge of at least one whole-time 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, relax the rule and permit only one whole-time medical officer to be employed for more than one or all shifts, subject to the conditions that.-(a)there shall be no relaxation in respect of nursing and other subordinate staff;(b)the medical officer shall be available in all shifts and shall attend to all injuries and sickness except in very minor ones;(c)the medical officer shall be provided with a residence close to the factory and shall be provided with a telephone and where there is no telephone an alternative arrangement shall be made for informing and calling the medical officer quickly; and(d)the medical officer shall not be employed for any other purpose.(2)The ambulance room or dispensary shall be separate from the rest of the factory and shall be used only for the purpose of first-aid treatment and rest. It shall have a floor area of at least 24-sq. metres and smooth, hard and impervious walls and floors and shall be adequately ventilated and lighted by both natural and artificial means. An adequate, supply of whole some 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 smooth top at least 180 cms. X 105 cms;(iii)Means for sterilizing instruments;(iv)A coach;(v)Two stretchers;(vi)Two buckets or containers with close fitting lids;(vii)Two rubber hot water bags;(viii)A kettle and spirit stove or other suitable means of boiling water;(ix)Twelve plain wooden splints 900 mm. X 100 mm. X 6 mm.;(x)Twelve plain wooden splints 350 mm. X 75 mm. X 12 mm.;(xi)Six plain wooden splints 250 mm. X 53 mm. X 12 mm.;(xii)Six woolen blankets;(xiii)Three pairs artery forceps;(xiv)One bottle of spiritus Ammoniac Armatics (120 ml.);(XV)Smelling salt (60 gms.);(xvi)Two medium size sponages;(xvii)Four kidney trays;(xix)Four cakes of antiseptic soap;(xx)Two glass tumblers and two wine glasses;(xxi)Two clinical thermometers;(xxii)Tea spoons-two;(xxiii)Graduated (120 ml.) measuring glass-two;(xxiv)Mini measuring glass-two;(xxv)One wash bottle (1000 c.c.) for washing eye.(xxvi)One bottle (one litre) carbolic lotion 1 in 20;(xxvii)Three chairs;(xxviii)One screen;(xxix)One electric hand torch;(xxx)Four first-aid boxes or cupboards, stocked to the standards prescribed under (C) of rule 64;(xxxi)An adequate supply of antitetanus texoid;(xxxii)Injections-Morphia, Pethidrine, Atropine, Adrenaline Coramine Novecain-6 ampules each;(xxxiii)Coramine liquid (60 ml.);(xxxiv)Tablets antihistaminic, antispasmodic (25 each);(xxxv)Syringes with needles 2 c.c., 5 c.c., 10 c.c., 50 c.c.;(xxxvi)Surgical scissors-three;(xxxvii)Needle holders;(xxxviii)Suturing needles and materials;(xxxix)Dissecting forceps-three;(xl)Dressing forceps-three;(xii)Scalpels-three;(xiii)Stethescope-one;(xliii)Rubber bandage-pressure bandage; and(xliv)Oxygen Cylinder with necessary attachments: Provided that.-(1)In case of any factory wherein the number of workers generally employed exceeds one thousand the Chief Inspector of Factories may require that the size of the ambulance room and the equipment to be provided shall be such as he may, by order in writing, specify.(2)Where there is a hospital or a dispensary belonging to the occupier of the factory situated in close proximity to the boundary of the factory, the Chief Inspector may, by an order in writing, declare that, subject to the conditions mentioned below, the said hospital or dispensary shall be deemed to be an ambulance room for the purpose of this rule-(a)the said hospital or dispensary shall have all such medicines, equipments and other articles and all such facilities as prescribed in this rule,(b)there shall be atleast one whole-time Medical Officer in the hospital or dispensary in each shift unless relaxation in respect thereof has been allowed under the proviso of sub-rule (1),(c)there shall be adequate nursing and other subordinate staff in each shift as prescribed in sub-rule (1) or as directed by the Chief Inspector,(d)efficient transport facilities shall be provided to remove serious cases of injury and sickness to the hospital or to the dispensary most speedily;(3)In every factory to which these rules

apply an ambulance van shall be provided and maintained in a perfect working condition and shall always be made available during working hours of the factory for the purposes of removing serious cases of accidents or sickness:Provided that where arrangements have been made for obtaining such ambulance van from any neighbouring hospital and the Chief Inspector is satisfied that the ambulance van will always be available for removing cases of accidents or sickness, he may, by an order in writing and subject to such conditions as he may specify, exempt the factory from maintaining such a van:Provided further that the Chief Inspector, if he is satisfied that on account of the proximity of a.Hospital or Dispensary, the financial position of the Factory, the employment or frequency of accidents or any other reasonable case, it is not necessary or practicable to provide an ambulance van in any factory, and if he is satisfied that alternative arrangements for quick transfer of any injured person to the nearest Hospital or Dispensary are available during all working hours of the factory, may, by an order in writing, relax the sub-rule in respect of that factory to such extent, subject to such conditions and for such period as may be specified in the said order,(4)There shall be displayed in the ambulance room or dispensary a notice giving the name, address and telephone number of the Medical Officer-in-charge and the hours during which he is on duty at the time in the ambulance room. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.(5)A record of all cases of accident and sickness treated at the room shall be kept and produced to the Inspector or Certifying Surgeon when required.

66. Canteen.

(1)The State Government may, by a notification in the Official Gazette, specify the names of factories in which more than 250 workers are ordinarily employed. Within six months of such notification, the occupiers of said factories shall provide an adequate canteen in or near the factory according to the standard prescribed in these rules:Provided that the Chief Inspector may, by a written order, relax this time limit and may direct the occupier to provide a canteen within such period as he may specify:Provided further that where more factories than one belonging to the same occupier are situated in close vicinity of one another, the State Government may, by a written order, permit the canteen centrally situated to be used for some or all of the factories subject to such conditions as the State Government may specify.(2)(i)The following plans of the canteen buildings in duplicate shall be submitted to the Chief inspector for approval:-(a)site plan;(b)the plan, elevation and necessary cross-sections of the buildings, indicating all relevant details including those of natural lighting, ventilation, etc.(ii)The Chief Inspector may require such other details and particulars to be furnished as he considers necessary and may approve the plan with such conditions or modifications as may be specified by him.(3)The canteen building shall be situated not less than fifty feet away from any latrine, urinal, boiler house, coal stack, ash dump and any other source of dust, smoke or obnoxious fumes:Provided that the Chief Inspector may for reasons to be recorded in respect of any particular factory, relax the provisions of this sub-rule to such extent as may be necessary and reasonable in the circumstances and may require measure to be taken to secure the essential purpose of this sub-rule; and(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, a cloak-room for the staff and washing places separately for workers and for utensils.(5)In canteen the floor and inside wall upto a height of 4 feet from the floor shall be made of smooth and impervious material; the remaining portion of the inside walls shall be made

smooth by cement plaster or in any other manner approved by the Chief Inspector.(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 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 every four months.(b)Records of dates on which lime-washing, colour-washing, varnishing or painting is carried out shall be maintained in register in Form no.7.(9)The precincts of the canteen 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.

67. Dining Hall.

(1)The floor space of each dining room shall not be less than 8 square feet for every diner to be accommodated. For calculating the minimum floor area to be provided in a proposed canteen it will be assumed that 25 per cent of the maximum number of workers employed in the factory at any one time shall make use of the canteen and the floor area in any canteen shall not be less than the figure worked out on this basis:Provided that in case of factories employing more than one thousand workers at a time the Chief Inspector may at his discretion reduce the assumption of 25 per cent to 15 per cent.(2)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.(3)Sufficient tables, chairs or benches shall be provided for the number of diners to be accommodated as prescribed in sub-rule (1).

68. Equipment.

(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 on the canteen shall also be provided and maintained.(2)The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition and shall be replaced whenever required. 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 the cleaning of utensils and equipment.

69. Prices to be charged.

(1)Food, drink and other items served in the canteen shall be sold on a no-profit basis and Tie prices charged shall be subject to the approval of the Canteen Managing Committee:Provided that where the canteen is managed by a Co-operative Society registered under any law for the time being in

force in respect of Co-operative Societies, such society may be allowed to include in the charges to be made for the food-stuffs served, a profit up to 5 per cent on its working capital applied in running the canteen.(2)The charge per portion of food-stuff, beverages and any other item served in the canteen shall be conspicuously displayed in the canteen.(3)In computing the prices referred to in sub-rule (1) the following items of expenditure shall not be taken into consideration, but will be borne by the occupier:- ,(a)the rent for land and building,(b)the depreciation and maintenance charge of the building and equipment provided for the canteen,(c)the cost of purchase, repair and replacement for equipment including furniture, crockery, cutlery and utensils,(d)the water charges and expenses for providing lighting and ventilation,(e)the interest of the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen,(f)the cost of fuel required for cooking or heating food-stuffs or water, and(g)the wages of employees serving in the canteen and the cost of uniforms, if any, provided to them.

70. Accounts.

(1)All books of accounts, 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 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 in such department:Provided further that where the canteen is managed by a Co-operative Society registered under any law for the time being in force in respect of the Co-operative Societies, the accounts pertaining to such canteen may be audited in accordance with the provisions of the said law.

71. Canteen Managing Committee.

(1)The Manager shall within one month from the date on which the canteen starts functioning, or in cases where a Canteen Managing Committee already exists, within one month from the date this rule comes into force constitute or reconstitute as the case may be, a Canteen Managing Committee (hereinafter to be called the Committee) for the running and supervision of the canteen, and a list containing the names of the members and Chairman of the Committee shall be sent to the Inspector and the Chief Inspector within seven days of the constitution of the Committee, and a copy thereof shall also be displayed on a notice board in the canteen which shall be maintained in a clear and legible condition.(2)The Canteen Managing Committee shall-(a)exercise general supervision over the running and management of the canteen and advise the Manager for such improvement and changes as may be necessary;(b)bring to the notice of the Manager, any malpractice or any defect that may be observed,(c)advise the Manager on matters relating to-(i)the quality and quantity of food, tea, snacks and other items served or to be served in the canteen,(ii)the arrangement of menu and times of meals,(iii)the method and means of serving and distributing articles served in the canteen, and(iv)make such other suggestions and recommendation as in the opinion of the Committee may be necessary for proper functioning of or for improvement in the Canteen.(3)The Manager shall normally take steps to give effect to the recommendations of the Committee but when

any advice or recommendation is not accepted, the reason therefor shall be communicated to the Committee in writing within a fortnight and a copy thereof shall be sent to the Inspector and the Chief Inspector.(4)The Manager shall decide the number of members in the Canteen Managing Committee which shall not be less than four excluding the Chairman.(5)The Canteen Managing Committee shall include representatives of workers whose number shall be equal to the number of members representing the employer, excluding the Chairman who shall be a nominee of the Manager.(6)Where there is a Welfare Officer in the factory, he shall be nominated by the Manager to be a member of the Canteen Managing Committee and he shall be the Secretary to the Committee, unless he is nominated to be the Chairman of the Committee:Provided that where there is no Welfare Officer, or where there is only one Welfare Officer and he is the Chairman of the Committee any other member of the Committee may be nominated by the Manager to be the Secretary.(7)The members representing the employer shall be nominated by the Manager and the members representing the workers shall be nominated by the recognised union. In case where there is no recognised union or there is dispute about the office-bearer of the recognised union then the representatives of the workers shall be elected by the workers themselves in such manner as may be decided by the Manager in consultation with the Chief Inspector subject to revision of the same by the State Government on appeal:Provided that in case where the representatives of workers are elected by the workers in the manner indicated above these representatives of workers will be replaced by the nominees of the recognised union as soon as there is a recognised union in that particular establishment or the dispute of the office bearers of the recognised union has been decided:Provided further that where there is Works Committee constituted under the Industrial Disputes Act, 1947 the Manager shall ask the said Committee to nominate members representing the workers. If no communication is received from the Works Committee within the time specified by the Manager and the Inspector of Factories and the Chief Inspector of Factories are satisfied that the Works Committee is deliberately not submitting the names of the representatives of the workers, then the Manager may elect members representing the workers in such manner as may be decided by him in consultation with the Chief Inspector subject to a revision by the State Government on appeal.(8)(i)The Manager shall in consultation with and on the recommendation of the Committee prepare the rules of business of the Committee, within one month of the constitution of the Committee in which the duties of the Secretary shall also be specified and a copy of these rules shall be sent to the Inspector and the Chief Inspector.(ii)Where there is any difference between the Manager and the Committee with regard to the preparations of the rules of business of the Committee, the matter shall be referred to the Chief Inspector whose decision thereon shall, subject to a revision by the State Government on appeal, be final.(9)(i)The Chairman shall conduct the business of and preside over the meeting of the Committee and shall cast his vote only in the case of equality of votes.(ii)The Chairman shall prepare a panel of names of the members of the Committee arranged in order of priority who shall preside over and conduct the meetings of the Committee, during his absence.(10)The Canteen Managing Committee shall function for one year whereafter the Manager shall dissolve the Committee and shall form a new Committee within one month of the dissolution of the Committee:Provided that so long as a new Canteen Managing Committee is not constituted the old Committee shall continue to function.(11)(i)The proceedings of the meeting of the Canteen Managing Committee shall be kept in a register and shall be produced for inspection whenever demanded by an Inspector.(ii)A copy of the proceedings of the meeting of the Canteen Managing Committee shall be forwarded to the Inspector and the Chief Inspector.

71A.

The State Government may exempt any factory from compliance with the provisions of rules 66 to 71 provided the factory makes provisions for the following matters, namely:-(a)an adequate dining hall with a kitchen;(b)adequate washing facilities in the dining hall;(c)arrangements for supply of snacks and tea and such other articles of food as may be required by the workers; or in keeping with the general food habits of the workers;(d)the plan of the dining hall shall be submitted to the Chief Inspector and prior approval thereof shall be obtained from him. Such modifications, addition or improvement shall be made therein as may be directed by the Chief Inspector;(e)the articles of food shall be sold on non-profit basis, shall be prepared and sold by the occupier departmentally and not through a contractor or any other agency;(f)the building, furniture, utensils, crockeries as well as other equipments shall be supplied by the occupier direct;(g)the occupier shall bear the cost of fuel, light, water and staff, and no charge in respect thereof shall be added to the price of articles sold in the canteen; and(h)the dining hall and kitchen shall be kept clean at all times, shall have adequate staff and the staff shall be provided with clean dresses and uniforms.

71B. Medical Examination.

(1)Annual Medical Examination for fitness for each member of the canteen staff who handles foodstuffs shall be carried out by the Factory Medical Officer or the Certifying Surgeon, which should include the following:-(i)Chest X-Ray,(ii)Routine blood examination,(iii)Routine and bacteriological testing of faeces and urine for germs of dysentry and typhoid fever.(2)Workers who have any skin sores must not be allowed to work in the canteen.(3)A certificate of fitness to work in a canteen shall be issued to all the staff which be produced on demand before an Inspector.

72. Shelters, rest rooms and lunch rooms.

(1)All factories shall conform to this rule within three months from the date of enforcement of these rules.(2)The Manager of a factory shall submit for the approval of the Chief Inspector a site plan in duplicate of the building to be constructed or adapted for the shelters, or rest rooms and lunch rooms which shall conform to the following standards:-(a)All the walls an roof of the building shall be of suitable heat resisting materials and shall be waterproof. The floors and walls to a height of 3 feet shall be so laid or finished as to provide a smooth, hard and impervious surface.(b)The height of every room in the building shall be not less than 12 feet from floor level to the lowest part of the roof and there shall be at least 12 square feet of floor area for every person and the accommodation shall not be less than ten per cent of the number of workers employed at any one time:Provided that (i) workers who habitually go home for their meals during the rest periods may be excluded with the approval of the Chief Inspector in calculating the number of workers to be accommodated, and (ii) in the case of factories in existence at the date of commencement of the Act, where it is impracticable; owing to lack of space to provide 12 square feet of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector.(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, buildings and precincts thereof in a clean and tidy condition.(f)[Suitable provisions shall be made in every room for supply and/or cool drinking water and adequate facilities for washing.] [Inserted by S.O. 686 dated 13.7.1988.]

73. Creches.

(1)All factories shall conform to rules 73 to 76 within six months from the date of enforcement of these Rules.(2)The creche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonably 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.(3)The building in which the creche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be waterproof. The floor and internal walls of the creche shall be cement plastered or so laid or finished as to provide a smooth impervious surface.(4)The height of the rooms in the building shall be not less than 12 ft. from the floor to the lowest part of the roof and there shall be not less than 12 square feet of floor area for each child to be accommodated.(5)Effective and suitable provision shall be made in every part of the creche for securing and maintaining adequate ventilation by the circulation of fresh air.(6)The creche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child, 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:Provided that for children over two years of age it will be sufficient if suitable bedding is made available.(7)A suitable fenced and shady open air playground 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 no sufficient space available for the provision of such a playground.(8)The manager shall appoint necessary staff in the creche to look after the children during the absence of their mothers.

74. Wash room.

(1)There shall be in or adjoining the creche a suitable washroom for the washing of the children and their clothings. The washroom shall conform to the following standards, namely:-(a)The floor and internal walls of the room to a height of 3 feet shall be so laid or finished 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 creche at any one time together with a supply of water provided, if practicable, through taps from a source approved by the Health Officer, such source shall be capable of yielding for each child a supply of at least five gallons of water a day.(c)An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the creche.(2)Adjoining the washing-room referred to above, a latrine shall be provided for the sole use of the children in the creche. The design of latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities or where there is no such Public Health Authority, by the Chief Inspector.

75. Supply of milk and refreshment.

- 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, 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.

76. Cloths for creche staff.

- The creche staff shall be provided with suitable clean cloths for use while on duty in the creche.

Chapter VI
Workings Hours of Adults

77. Compensatory holidays.

(1)Expert in the case of workers engaged in any work which for technical reasons must be carried on continuously 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 following month 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 holidays shall be made not less than three days in advance of the date of that holiday.(3)Any compensatory holiday or holidays to which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.(4)The manager shall maintain a register in Form no. 9: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 Section 52, 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 the factory.(5)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.

78. Muster-roll exempted factories.

- The manager of every factory in which workers are exempted under Section 64 or 65 from the provisions of Section 51 or 54 shall keep a muster-roll in Form no. 10 showing the normal piecework rate of pay; or the rate of pay per hour, of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefor of all exempted workers. The muster-roll in Form no. 10 shall always be available for inspection.

78A. Computation of cash equivalent of concessional sale of food grains etc.

- The cash equivalent of the advantage accruing through the concessional sale to a worker of foodgrains and other articles shall be computed at the end of every wage period fixed under the provisions of the Payment of Wages Act, 1936 (IV of 1936).

78B. Cash equivalent of concessional sale of food grains allowed for overtime work.

- For the purposes of computing cash equivalent to the advantage accruing through the concessional sale to a worker of food grains and other articles, the difference between the value of the foodgrains and other articles at the average rates prevailing during the wage period in the nearest market, in which such worker worked overtime and value of foodgrains and articles supplied at concessional rates shall be calculated and allowed for the number of overtime hours during which he worked overtime.Note.-This rule shall not apply to any Railway Factory, whose alternative method of computation has been approved by the State Government.

79. Notice of periods of work for adults.

- The notice of periods of work for adult workers shall be in Form no. 11 and it shall be maintained in the manner prescribed in sub-section (2) of Section 108 of the Act.

80. Register of adult workers.

- The register of adult workers shall be in Form no.12, and shall be maintained in accordance with the following provisions:-(1)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 or relay from which he has been transferred.(2)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.(3)All entries in the registers shall be made in ink and shall be legible.

80A. [Issue of Identity Cards to workers. [Inserted by S.O. 764 dated 18.6.1986.]

(1)The State Government may by notification in the Official Gazette, specify the type of industries/factories which are required to issue identity cards to its workers.(2)The identity card shall be in Form No. 12-A and shall be prepared in duplicate and one copy shall be given to the worker and another shall be retained by the Occupier/Manager of the factory.(3)A passport size photograph of the worker, duly attested by the Occupier/Manager, shall be affixed on the identity

card in the place provided for it.(4)The cost of photograph shall be borne by the Occupier/Manager.(5)If the identity card is lost or damaged by the worker, a duplicate may be issued to him on payment of Rs. 5.(6)The Occupier/Manager of the Factory shall also maintain a register showing the names, designation, address and the number of the identity card of the workers to whom identity card have been issued and a copy of the attested photograph mentioned in sub-rule (3) shall also be affixed in it against the name of the workmen.(7)The identity card shall be shown to the Inspector, if demanded in course of inspection.]

81. Persons defined to hold position of supervision and management.

- The following persons shall be deemed to hold positions of supervision and management:-(a)All persons specified in the Schedule annexed hereto;(b)Any other person, who, in the opinion of the Chief Inspector, holds a position of supervision or management and has been declared by him as such in writing.

Schedule 15

List of Persons Deemed to Hold Positions of Supervision and Management in Factories.(1)All Managers, General Managers, Deputy General Managers, Assistant Managers and Works Managers.(2)Chief Engineers, Chief Chemists and Chief Metallurgist, Deputy Chief Chemists and Deputy Chief Metallurgists.(3)Deputy Chief Engineers, Deputy Chief Chemists and Deputy Chief Metallurgists.(4)Heads of Departments.

82. Persons defined to hold confidential position.

- The following persons employed in a factory shall be deemed to be employed in confidential positions:-(a)Time-keepers.(b)Personal Assistants and Stenographers attached to persons specified in the Schedule annexed to Rule 81 and declared to be persons holding positions of supervision or management under clause (b) of the said Rule.(c)Head Store-keeper.(d)Head Clerk and Office Superintendents.(e)Cashier.(f)Clerk dealing with accounts.(g)Labour Officers, Labour Welfare Officers, Personnel Officers and Welfare Officers.(h)Administrative and Assistant Administrative Officer.(i)Watch and Ward and Security Staff.(j)Any other person declared in writing by the Chief Inspector to be holding a confidential position.

83. List to be maintained of persons holding confidential position or position of supervision and management.

- A list showing the names and designation of all persons specified in rules 81 and 82 shall be maintained in every factory and shall be produced before the Inspector whenever required.

84. Exemption of certain adult workers.

(1)Adult male workers engaged in factories or in plants attached to factories, specified in column 2 of the Schedule hereto annexed, in any work specified in column 3 of the said Schedule shall be

exempted from the provisions of the Sections specified in column 4 subject to the conditions, if any, specified in column 5 of the said Schedule:Provided that except in case of workers exempted under clause (a) of sub-section (2) of Section 64:-(i)the total number of hours of work in any day shall not exceed ten;(ii)the total number of hours of overtime work shall not exceed fifty in any one quarter; A(iii)the spread over, inclusive of intervals for rest, shall not exceed twelve hours in any one day.(2)Adult male workers engaged in any work which for technical reasons must be carried on continuously and who have been exempted from Sections 52 and 55 under Section 64(2)(d) in sub-rule (1) shall be further exempted from the provisions of Sections 51, 54, 56 and 61 of the Factories Act, 1948 and the restrictions imposed in clauses (i) and (ii) of sub-section (4) of Section 64 shall not apply in case of such workers subject to the following conditions, namely:-(a)that this exemption shall apply only when the worker is not relieved at the end of the period of his work owing to failure of the reliever to report for duty at the appointed hours;(b)that the total hours of overtime shall not exceed fifty in any one quarter.Explanation.-'Quarter' means a period of three consecutive months beginning on the 1st of January, the 1st of April, the 1st of July and the 1st of October, respectively.

Schedule 16

Sl. No.	Section of the Act empowering grant of exemption	Class of Factory.	Nature of exempted work.	Extent of exemption	Remarks.
1	2	3	4	5	6
1.	64(2)(a) and 64 (3)	All factories.	Urgent repairsExplanation. -(1) Thefollowing shall be considered to be urgent repairs:-(a) Repairs to any part of themachinery plant or structure of a factory which is of such anature that delay in the execution may involve danger to humanlife or safety or stoppage of any manufacturing process.(b) Break-down repair to motivepower, transmission or other essential plants or machinery orother factories, collieries, railways, dockyards and harbours,tramways, motor transport and steam navigation services,	Sections 51, 52, 54, 55, 56 and 61.	Within 24 hours of the commencement of work, a notice shall besent to the Inspector describing the nature of the urgent repairsand the period likely to be required for its completion. A copyof the same notice shall be displayed on the Notice Board priorto the commencement of the urgent

gasgenerating stations, electric generating station and transmissionsystems, pumping stations, or similar essential or public utilityservices, carried out in any general engineering workshop orfoundry which may be essential to enable such concerns andservices to maintain their normal manufacturing processes,production operation or service.(c) Repairs to ships and aircraftsdone in a factory which are essential to enable such ship&oraircrafts to leave port at proper time or to continue theirnormal operations in a sea or air worthy conditions as the casemay be.(d) Repairs in connection with achange of motive power, for example, from steam to electricity orvice versa, when such work cannot be done without stoppage of thenormal manufacturing process.(e) Urgent repairs to earth movingor other vital machinery or plants used in the construction ofdams and other works of engineering construction carried out inan engineering works shop or foundry, provided the work is ofsuch a nature that if the repair is not carried out, the mainwork of construction is liable to be held up.(f) Break down repairs of Automobiles carried out in anAutomobile repair.

			or Engineering Workship.		
2.	64(2)(b) and 64(3).	All factories other than those which work throughout the dayin a system of relays.	(i) Work in foundry on operation ofa cupola and steel furnaces and pouring of metals and any otherwork connected or incidental thereto.(ii) Work in connection with themaintenance of mill gearing, electric drives, mechanical orelectrical lifts, steam on water pipes and pumps.(iii) Work of examining orrepairing of any machinery or other plant which is necessary forcarrying on the work in the factory.(iv) Work of lighting fire in Boiler Houses and Engine Rooms,in order to raise steam, or generate gas, preparatory to thecommencement of regular work in the factory.	Sections 51, 54, 55, 56 and 61.	As above serial no. 1.
3.	64(2)(b) and 64 (3).	Factories manufacturing explosives.	(i) Cartridging of explosives.(ii) Cleaning of plant in thepacking, mixing and ingredient preparation sections.(iii) Packing of explosives.	Sections 51, 54, 55, 56 and 61.	
4.	Ditto	Factories manufacturing beverages;	Preparation and handling of syrup and other ingredients andsame materials, filling and cleaning of bottles and other workincidental thereto.	Ditto.	
5.	64(2) (c) and 64(3).	All factories other than those which work throughout the dayin a system of relays.	(i) Work of drivers and attendantupon lighting, ventilating and humidifying plants.(ii) Work of Fire Pump Men.	Sections 51, 54, 55 and 61.	
6.					

	64(2) (c) and 64(3).	Cold storage and refrigeration factories or for Cold storageand refrigeration plants attached with the factories.	Work of loading and unloading andtransports of articles.Explanation.-The work of loading and unloading includeswork of and in connection with stocking of articles forpreservation in the storage rooms and removal therefrom besides,loading and unloading on transport vehicles.	Sections 51, 54, 55 and 61.	
7.	Ditto	All factories	Operation of locomotives and rolling stocks, loading andunloading of goods transported by trucks and motor vehicles,operation of motor vehicles for transport of materials within thefactory and any other work connected or incidental thereto.	Ditto	
8.	Ditto	Rice Mills	Drying lifting and storing of paddy or any other workincidental thereto.	Ditto	
9.	64(2) (d)	Iron and Steel Smelting and rolling and wire drawing and wirerope making factories and similar plants attached to otherfactories	Operation of blast furnaces, steel, smelting furnaces rollingmills and wire drawing machines and making of wirer-opes.	Sections 51, 54, 55 and 61.	(1) Every such workers shall beallowed adequate time to take light refreshments or meals at theplace of his employment in a room or a place specially providedfor the purpose, arranged in such a manner that it. may not causeinconvenience to the workers

and at the same time may not requirestopping of any plant, machinery or process or the normalfunctioning of the factory.(2) Every worker shall be allowedat least one weekly holiday in every week on the aver-age andwhenever in any week the permitted hours of work daily or weeklyis exceeded, extra wages for overtime on any particular weekshall be paid in accordance with the provisions of Section 59.(3) A notice describing the system of work, change of shiftsand grant of weekly holidays, shall be sent to the Inspector andthe Chief Inspector in advance and no change shall be madetherein without prior intimation to the Inspector and

					ChiefInspector and subject further to the provisions of sections 61and 63.
10.	64(2)(d)	Foundries and Forge plants and General Engineering factories.	Operation of Cupola, and other Iron or Steel melting furnaces,and Heat treatment furnaces and plants, ovens and other furnaces,making of patterns and moulds and forging operations.	Ditto	Ditto
11.	Ditto	Copper smelting and Copper and brass rolling factories.	Operation of rope ways, handling of raw materials,concentration, smelting, refining, manufacture of alloys androlling.	Ditto	...
12.	Ditto	Coke manufacturing works and such plants attached to otherfactories.	(i) Operation of coke ovens.(ii) Recovery and treatment of bye-products.	Ditto	Ditto
13.	Ditto	Coke bye-products recovery and treatment factories	Recovery and treatment of bye-products	Ditto	Ditto
14.	64(2)(d)	Electric power generating and transforming factories andBoiler houses or such plants attached to other factories.	(i) Operation of or attending uponboilers and its accessories.(ii) Operation of or attending uponprime movers, generators, motor generators, retary convertorsboosters, transformers or similar other plants.(iii) Attending upon storagebatteries.iv) Operation of or attending upon switch boards.	Ditto	As above serial no.9
15.	Ditto	Water pumping and Alteration	Driving or attending upon engines, motors, pumps and	Ditto	Ditto

		factories or such plants attachedto other factories.	otheraccessories.		
16.	Ditto	Ice factories and cold storage/plants or such plants attachedto other factories.	Operation of or attending upon compressors, pumps and otherplants and equipments.	Ditto	Ditto
17.	Ditto	Factories manufacturing gas or any gas plants in any otherfactory.	Production of oxygen, carbondioxide, acetylene or any othergas.	Ditto	Ditto
18.	Ditto	Cement factories	Work on-(i) Handling, preparation, grindingand treatment of raw materials,(ii) Kilns,(iii) Cement grinding, packing andstoring,(iv) Testing and samples inlaboratories,(v) Ropeways.	Ditto	Ditto
19.	64(2)(d)	Refractories and potteries	(i) Operation of and attending upondisintegrators grinding mills and pug mills.(ii) Moulding(iii) Firing and attending upon kilns.	Ditto	Ditto
20.	Ditto	Glass factories.	(i) Mixing, grinding and handlingof raw materials.(ii) Operation of and attending upon furnances and changing ofand attending upon pots.	Ditto	Ditto
21.	Ditto	Paper Factories	Work on-(i) Preparation of raw materials;(ii) Digesters;(iii) Diffusers, washing andsorting;(iv) Soda recovery plant;(v) Bleaching breach-making plant;(vi) Breaking and beating plant;(vii) Paper-making cutting and	Ditto	Ditto

			finishing.		
22.	Ditto	Vegetable Oil Hydrogenation factories.	(i) Refining;(ii) Hydrogenation;(iii) Deodorising;(iv) Production and compression of Hydrogen and Oxygen.	55 and 61.	As above serial no.9
23.	Ditto	Chemical and Fertilizer Factories and such plants attached toother factories	Manufacture of sulphuric, hydrochloric and nitric acids,sulphates, sulphides, nitrates, superphosphates, alum, oxides ofiron and explosives.	Ditto	Ditto
24.	Ditto	Oil Refineries.	Handling of crude oil and all the process of and connectedwith manufacture of petroleum and petroleum products.	Ditto	Ditto
25.	64(2)(d)	Lead Factories.	Works on sintering plant and reducing and refining furnace andoperation of and attending upon any plant for recovery of anyother metals.	Ditto	Ditto
26.	Ditto	Factories in which wheels, wheel tyres and Axles, Locomotive,Automobiles or Railway wagons or carriages are manufactured orsuch plants attached to other factories.	Manufacture of wheel, Tyres and Axles, Locomotive. Automobileor Railway carriages and wagons.	Ditto	Ditto
27.	Ditto	Roller Flour Mills.	Milling and bagging of flour.	Ditto	Ditto
28.	Ditto	Sugar factories	Work on-(i) Handling and crushing of caneand handling of 'Gur';(ii) Filtration, Clarification andcrystalization of cane juice and "gur" liquor;(iii) Curing of mother liquor;(iv)	Ditto	Ditto

			Drying, crushing, bagging andhandling of sugar;(v) Burning of limestone and sulpher.		
29.	Ditto	Plywood Factories	Preparation of glue, gluing, combining, pressing and drying.	Ditto	Ditto
30.	Ditto	Oil Mills	Operation of Ghanies and Oil expellers.	Ditto	Ditto
31.	Ditto	Aluminium Factories, including manufacture of Aluminium.	Work on-(i) Handling, preparation of rawmaterials,(ii) Digesters,(iii) Filters,(iv) Settling tanks,(v) Precipitators,(vi) Kilns,(vii) Refining, Rolling and pressing.	Ditto	Ditto
32.	64(2)(d)	Distilleries and Brewaries	Work on..(i) Diffusion of Mahua;(ii) Dilution of molasses;(iii) Fermentation;(iv) Yeast propagation;(v) Distillation,(vi) Handling and preparation of raw materials forfermentation.	Ditto	Ditto
33.	Ditto	Coal Washeries.	Handling, Crushing, Washing, floatation grading and conveyingof coal.	Ditto	Ditto
34.	Ditto	Jute, Cotton and other Textile Mills.	Handling and preparation of raw material, carding, spinningand weaving yarns and textiles.	Ditto	Ditto
35.	Ditto	All factories exempted under section 64(2) (d) and mentionedin serial 9 to 33 of this Schedule.	(i) Operation of or attending uponboilers, prime movers and plants for lighting ventilating orhumidifying.(ii) Such other work and process which are incidental to orconnected with and which must proceed concurrently with theexempted work and processes, and which must	Ditto	Ditto

			for technical reasonsbe carried on continuously.		
36.	64(2)(i) 64(3).	(i) Factories wherein printing of newspaper is carried	Printing of newspapers including such other work which may beincidental or connected thereto.	Sections 51, 54, 56 and 61.	(i) This exemption shall beapplicable only to the workers engaged in the printing ofnewspapers who are held up on account of break down of machinery,(ii) Within 24 hours of breakdown a notice shall be sent tothe Inspector describing the nature of the break down and givinga list of the workers along with hours or over time worked byeach.
37.	64(2) and 64(3).	(i) All factories.	Loading and unloading of railway wagons.	Sections 51,52, 54, 55, 56 and 61.	1. When any worker is allowed towork overtime under this exemption, notice thereof shall be sentto the Inspector.2. Whenever any worker is allowedto work on a weekly holiday and substitute holiday is not grantedas per Section 52 compensatory

holiday shall be granted asprovided in Section 53.3. The workers shall be allowed sufficient time to take lightrefreshment during any period exceeding four hours.

Chapter VII
Employment of Young Persons

85. Notice of periods of work for children.

- The notice of periods of work for child workers shall be in Form no. 13, and it shall be maintained in the manner prescribed in sub-section (2) of Section 108 of the Act.

86. Register of child workers.

- The register of child workers shall be in Form no. 14, and shall be maintained in accordance with the following provisions:-(1)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 of 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.(2)Where a child 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.(3)All entries in the registers shall be made in ink and shall be legible.

Chapter VIII
Leave with wages

87. Leave with wages register.

(1)The Manager shall keep a register 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, maintained in place of and be treated as the register or return required under this 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 and shall be produced before the Inspector on demand.

87A. Calculation of cash equivalent of the advantages accruing through concessional sale of foodgrains in respect of worker proceeding on leave.

- The cash equivalent of the advantage accruing through the concessional sale of food grains and other articles payable to workers proceeding on leave shall be the difference between the value at the average rates in the nearest market prevailing during the month immediately preceding his leave and the value of the concessional rates allowed of foodgrains and other articles he is entitled to.Explanation.-For the purpose of calculating the cash equivalent, monthly average market rate of foodgrains and other articles shall be computed at the end of every month.

88. Leave book.

(1)The Manager shall provide every worker with a Leave Book in Form no. 15 not later than the 31st of January of the year following the year in which the worker is employed in the factory. The Leave Book shall be the property of the worker and the worker shall not be required to produce it except for the purpose of making necessary entries therein and a Leave Book so produced shall be returned to the worker within seven days:Provided that-(a)when a worker is discharged or dismissed or when his service is otherwise terminated during the course of a year, the Manager shall give him an abstract of the Leave with Wages Register within a week of the date of discharge or dismissal or of termination of service, as the case may be;(b)the Leave with Wages Register shall always be kept complete and up-to-date and whenever any entry is made in the said register corresponding entry shall simultaneously be made in the Leave Book;(c)whenever any application for grant of leave is refused an entry to the effect shall be made in the Leave with Wages Register and in the Leave Book.Explanation.-The term 'year' means "calendar year".(2)If a worker loses his Leave Book, the Manager shall provide him with another copy on the payment of fifty paise and shall complete it from his record.

89. Medical Certificate.

- If any worker is absent from work due to illness and he wants to avail himself of the leave with wages due to him to cover the whole or part of period of his illness under clause (7) of Section 79 of Chapter VIII, he shall, if required by the Manager, produce a medical certificate signed by a Registered Medical Practitioner or recognised Valid or Hakim stating the cause of the absence and the period for which the worker, is, in the opinion of such medical practitioner, unable to attend to his work, or other reliable evidence to prove that he was actually sick during the period for which the leave is to be availed of.

90. Notice to Inspector of involuntary unemployment.

- The Manager shall give, as soon as possible, a notice to the Inspector of every case of involuntary unemployment of workers, giving number of unemployed and the reason for their unemployment. Entries to this effect shall be made in the Leave with Wages Register and the Leave Book in respect of each worker concerned.

91. Notice by worker.

- Before or at the end of every calendar year, a worker who may be required to avail of leave in accordance with sub-section (8) of Section 79, may give notice to the Manager of his intention not to avail himself of the leave with wages falling due during the following calendar year. The Manager shall make an entry to that effect in the Leave with Wages Register and in the Leave Book of the Worker concerned.

92. Notice of Leave with Wages.

- In the case of a factory in which a scheme for regulating the leave allowable under Section 79 of the Act has been drawn up under sub-section (4) of Section 79-(1)As far as circumstances permit, members of same family, comprising him and, wife and children shall be allowed leave on the same date.(2)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.

- If a worker dies before he resumes work, the balance of his pay, due for the period of leave, with wages not availed of shall be paid to his nominee within one week of the intimation of death of the worker. For this purpose each worker shall submit a nomination in Form no. 25 duly signed by himself and attested by two witnesses. The nomination shall remain in force until it is cancelled or revised by another nomination.

94. Register to be maintained in case of exemption under section 84.

(1)Where an exemption is granted under Section 84 the Manager shall maintain a register showing the position of each worker as regards leave due, leave taken and wages granted.(2)He shall display at the main entrance of the factory, a notice giving full details of the system established in the factory for leave with wages and shall send a copy of it to the Inspector.(3)No alteration shall be made in the leave rule approved by the State Government at the time of granting exemption under Section 84 without its previous sanction.

Chapter IX
Special Provisions

95. Dangerous operations.

(1)The following operations when carried on in any factory are declared to be dangerous operations under Section 87:-(1)Manufacture of aerated water and processes incidental thereto.(2)Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds.(3)Manufacture and repair of electric accumulators.(4)Glass manufacture.(5)Grinding or glazing of metals.(6)Manufacture and treatment of lead and certain compounds of lead.(7)Generating petrol gas from petrol.(8)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.(9)Liming and tanning of raw hides and skins and process/incidental thereto.(10)Certain lead processes carried on in Printing Presses and Type Foundries.(11)Manufacture of Pottery and Processes incidental thereto.(12)Manufacture of articles from refractory materials including manufacture of refractory bricks.(13)All operations, in which any chemical is manufactured, recovered, handled, used or processed and any other work or process connected or incidental thereto, carried on in any factory.(14)Compression of oxygen and hydrogen.(15)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.(16)Manufacture or manipulation of manganese and its compounds.(17)Manufacture and manipulation of dangerous pesticides.(18)Manufacture, use, storing, handling or manipulating of benzene or any substance containing benzene.For this purpose Benzene includes all aromatic hydro carbons having the chemical formula C6 H6.(19)[Process of extraction of oil or other substances from Oil- cakes, rice bran or from any other material or substance by the use of any solvent] [Inserted by S.O. 686 dated 13.7.1988.](20)[Operation involving High Noise levels.] [Inserted by S.O. 686 dated 13.7.1988.]

I

Manufacture of Aerated Waters and Processes incidental thereof.

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 a bursting bottle or syphon from striking any person employed in this 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 bath arms to protect the whole hand and armsProvided 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 bottler 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 aH persons engaged in corking, crowning, screwing, wiring, foiling, capsuling, sighting or labelling bottles or syphons-(a)suitable face-guards to protect the face, neck and throat, and(b)suitable gauntlets for both arms to protect the arm and at least half of the palm and the space between the thumb and forefinger.

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

II

Electrolytic Plating for Oxidation of Metal Articles by use of an Electrolyte Containing Chromic Acid or Other Chromium Compounds.

1. Definitions.-For the purposes of this schedule:-

(a)"Electrolytic chromium process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing chromic acid or other chromium compounds.(b)"Bath" means any vessel used for an electrolytic chromium process or for any subsequent process.(c)"Employed" means in paragraphs 5, 7, 8 and 9 of this Schedule, employed in any process involving contact with liquid from a bath.(d)"Suspension" means suspension from employment in any process involving contact with liquid from any bath by written certificate in the Health Register, signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

2. Exhaust draught.-An efficient exhaust draught shall be applied to every vessel in which an electrolytic chromium 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. Prohibitions relating to women and young persons.-No woman adolescent or child shall be employed or permitted to work at a bath.

4. Floor of work-rooms.-The floor of every room 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 clothing.-(1) The occupier of the factory shall provide and maintain in good and clean condition the following articles of protective clothing for the use of all persons employed in any process at which they are liable to come in contact with liquid from a bath and such clothing shall be worn by the persons concerned:-

(a)waterproof aprons and bibs, and(b)for persons actually working at a bath, lose-fitting rubber gloves and rubber boots or other waterproof foot-wear.(2)The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and adequate arrangements for the drying of the protective clothing.

6. Medical requisites.-The occupier shall provide and maintain a sufficient supply of suitable ointment and impermeable water-proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping the ointment and plaster.

7. Medical Examinations.-(a) Every person employed in the process shall be examined by a Medical Officer of the Factory at least twice in every week, and by the certifying surgeon at least once in every three months-

(b)In a factory in which whole time Medical Officer is not employed, the weekly examinations may be carried out by any qualified medical practitioner, or by a responsible person especially trained for this purpose and certified by the certifying surgeon or by the Medical Inspector of Factories, to be competent to carry out this examination.(c)A register containing the names of all persons employed in the process shall be kept in Form no. 16 and the result of all examinations, whether weekly or otherwise, shall be duly entered in the said" register by the person carrying out the examination and shall be duly signed by him. The said register shall be produced before and examined by the certifying surgeons at every visit or at least once in every three months.(d)It shall be the duty of the Manager and the occupier to arrange for the medical and other examinations as prescribed in this clause and to produce all persons required to be examined at the place and time appointed for the said purpose and every person employed in the process shall whenever required himself at the appointed time and place.(e)No person after suspension shall be employed in the process without the written permission of the certifying surgeon duly entered in the register in Form no. 16.The suspended person may be employed during the period of suspension in such other job as may be

advised or recommended by the certifying surgeon.

8. Cautionary placard.-A cautionary placard in the form specified by the Chief Inspector 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 not conveniently read by the workers.

9. Weekly examination.-A responsible person appointed in writing by occupier of the factory shall-twice in every week inspect the hands and forearms of all persons employed and shall keep a record of such inspections in the Health Register.

III

Manufacture and Repair of Electric Accumulators

1. Saving-: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 the 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 posted plates involving the use, movement or manipulation of; or contact with any oxide of lead.(b)"Manipulation 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.(c)"Suspension" means suspension from employment in any lead process by written certificates in the Health Register (Form no. 16) signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

3. Prohibition relating to women and young persons.-No women 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. Airspace.-In every room in which a lead process is earned 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 12 feet shall be taken into account.

6. Ventilation.-Every work-room 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 five feet.

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 material 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 shop 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.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 shop shall-(c)be cleansed daily either after being thoroughly damped or by means of a suction 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 down in an enclosed apparatus so as to prevent the escape of dust into the workroom;(c)Pasting;(d)Trimming, brushing, filling or any other abrading or cutting of pasted plates giving rise to dust;(e)Lead burning, other than-(i)"tacking" in the formation room;(ii)chemical burning for the making of lead linings 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 at 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 8 feet from the floor, not more than 2 feet in width, provided that as regards racks or shelves set or drawn from both sides the total width shall not exceed 4 feet.

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

15. Medical examination.-(a) Every person employed in a lead process shall be examined by the Certifying Surgeon within the seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the 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.

"First employment" means first employment in a lead process in the factory or workshop and also reemployment therein in a lead process following any cessation of employment in such process for a period exceeding three calendar months.(b)A Health Register in Form no. 16 containing the names of all persons employed in lead process shall be kept.(c)No person after suspension shall be employed in lead process without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

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 foot-wear and also as regards 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.

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 the use of all persons employed in lead process :-

(a)a cloak room for clothing put off during working hours with adequate arrangements 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 two feet 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 two 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 a constant supply of water laid on;(iii)a sufficient supply of clean towels made of 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(iv)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.-Be fore 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 two feet of trough for each such person this rule 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. Foods, drinks, etc., prohibited in work-rooms.-No food, drink, 'pan' and 'supari' or tobacco shall be consumed or brought by any worker into any work room 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 of process, that, owing to the special method of work or the special conditions in a factory or otherwise any of the requirements of this Schedule can be suspended or relaxed without 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 authorise such suspension or relaxation as may be indicated in the certificate for such period and on such conditions as he may think fit.

2. Definitions.-For the purpose of this Schedule.-(a) "Efficient exhaust draught" means localised ventilation effected by 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, fume or dust 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 the 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 1,000 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 filterate shall then be precipitated as lead sulphide and weighed as lead sulphite.(c)"Suspension" means suspension from employment in any process specified in paragraph 3 by written certificate in the Health Register Form no. 16 signed by the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process.

3. Exhaust draught.-The following processes shall not be carried on except under an efficient exhaust draught or under such other conditions as may be approved by he Chief Inspector:-

(a)The mixing of raw materials 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, fumes or ammoniacal vapours are given off.(d)All processes in making of furnace moulds or "pots" including the grinding or crushing of used "pots",(e)All processes 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 giving of silica dust shall be kept moist and shall comply with the following requirements:-

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

6. Use of hydrofluoric acid-The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid:-

(a)There shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation in all parts of the room;(b)The floor shall be covered with gutapercha and be light and shall slope gently down to a covered drain;(c)The workplaces 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 contrived that the gases are exhausted downwards.

7. Storage and transport of hydrofluoric acid.-Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles, made of lead or rubber.

8. Blow-pipe.-Every glass blower shall be provided with a separate blow-pipe bearing the distinguish mark of the person to whom it is issued and suitable facilities shall be readily available to every glass blower for sterilising his blow-pipe.

9. Food, drinks, etc., prohibited in workrooms.-No food, drink 'pan' and 'supari' or tobacco shall be brought into or consumed by any worker in any room or work place wherein any process specified in paragraph 3 is carried on.

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

11. 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 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 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.

12. Medical Examination.-(a) Every person employed in any process specified in paragraph 3 shall be examined by the Certifying Surgeon within seven days preceding or following, the date of his first employment in such process and thereafter shall be examined by the 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.

(b)A Health Register in Form no. 16 containing the names of all persons employed in any process specified in paragraph 3 shall be kept.(c)No person after suspension shall be employed in and process specified in paragraph 3 without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

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 sand stones are fitted.(b)"Abrasive wheel" means a wheel manufactured of bonded emery or similar 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, mop 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 the chipping of the surface of a grindstone by hack of similar tool.(g)"Rodding" means the dressing of the surface of a revolving grindstone by the application of a road, bar or strip of metal to such surface.

2. Exceptions.-(1) Nothing in this Schedule shall apply to any factory in which only repair 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 no person is employed for more than 12 hours in any week.(3)The Chief Inspector may, by certificate in writing, subject to such conditions 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 glazing 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 dust of adequate size, air tight and so arranged as to be capable of carrying away the dust, which dust 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 processes 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. Examination of dust equipment.-(a) All equipments for the extraction or suppression of dust shall at least once in every six months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

(b)A register containing particulars of such examination and test shall be kept in a form approved by the Chief Inspector.

VI

Manufacture and Treatment of Lead and Certain Compounds of Lead

1. Exemption.-Where 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, he may by certificate in writing exempt any factory from all or any 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, yield to an aqueous solution of hydrochloric acid and, 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" means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove, oil facts, 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 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.(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 originate.

3. Application.-This Schedule shall apply to all factories or parts of 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 of ashes containing lead, the desilverising of lead or the melting of scrap lead or zinc.(c)The manufacture of solder or alloys containing more than ten 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 a lead compound.(g)The cleaning of work-rooms where any of the operation aforesaid are carried on.

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

5. Requirements to be observed.-No person shall be employed or permitted to work in any process involving the use of lead compound 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 14 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. Certificate of fitness.-A person medically examined under paragraph 8 and-found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form no. 24 and such certificate shall be in the custody of the Manager of the Factory. The certificate shall be kept readily available for inspection by any Inspector and the person granted such a certificate shall carry with him; while at a work a token giving reference to such certificate.

8. Medical Examination.-(1) The person so employed shall be medically examined by a Certifying Surgeon within 14 days of his first employment in such process and thereafter shall be examined by the Certifying Surgeon at intervals of not more than three months, and a record of such examination shall be entered by the Certifying Surgeon on .the special certificate of fitness granted under paragraph 7.

(2)If at any time the Certifying Surgeon is of opinion that any person is no longer fit for employment on the grounds that continuance therein would involve special danger to health, he shall cancel the special certificate of fitness of that person.(3)No person whose special certificate of fitness has been cancelled shall be employed unless the Certifying Surgeon, after re-examination, again certifies him to be fit for employment.

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 workroom 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 person 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 within 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 their meals. The arrangements shall consist of the use of a room separate from any workroom 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.

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

Generating Petrol Gas from Petrol

1. Prohibition relating to women and young persons.-No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generating of petrol gas from petrol is carried on.

2. Flame traps.-The plant for generating petrol gas from petrol 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.

3. Generating building or room.-All plants for generating petrol gas from petrol erected after the coming into force of the provisions specified in this Schedule, shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as the "generating building"). 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 plants 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 resiling materials.

4. Fire extinguishers.-An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for generating petrol gas from petrol.

5. Plant to be approved by Chief Inspector.-Petrol gas shall not be manufactured except in a plant for generating petrol gas the design and construction of which has been approved by the Chief Inspector.

6. Escape of petrol.-Effective steps shall be taken to prevent petrol from escaping into any drain or sewer.

7. 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 posted in the factory prohibiting smoking and the carrying of matches, fire or naked light or other means of producing a naked light or spark into such room or building.

8. Access to petrol or container - No unauthorised person shall have access to any petrol or to a vessel containing or having actually contained petrol.

9. Electric fittings - All electric fittings shall be of flame proof construction and all electrical conductors shall either be enclosed in metal condicts or be lead sheathed.

10. 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.

11. Repair of container - No vessel that has contained petrol shall be repaired in a generating room or building and no repairs to any such 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 petrol or inflammable vapour.

12. Unless there be anything repugnant in the subject or context, the word 'petrol' wherever used in this Schedule includes 'dangerous petroleum' as defined in the Petroleum Act, 1934.

13. The Chief Inspector may, with the previous approval of the State Government, exempt any factory or plant from any of the provisions of this Schedule subject to such conditions as may be specified in writing by the Chief Inspector. The exemption granted may, with the like approval, be revoked at any time.

VIII

Cleaning for Smoothing, Roughening, etc., of Articles by a Jet of Sand, Metal Shot, or Grit, or Other Abrasive Propelled by a Blast of Compressed Air of Stream(Blasting Regulations)

1. Definitions.-For the purposes of this schedule "Blasting" means cleaning, smoothing, roughening or removing of any part of the surface of any article by the use as an abrasive of a jet of sand, metal shot, or grit or other material, propelled by a blast of compressed air or steam.

"Blasting enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein."Blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise."Cleaning of castings" 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 include the removal of cores and the general smoothing of a casting but does not include the freeing of castings from scales formed during annealing or heat-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.

3. Prohibition of employment of women and young persons.-No women or young person shall be employed or permitted to work at any operation of sand blasting.

4. Precautions in connection with blasting operations:-

(1)Blasting to be done in blasting enclosure - Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and clearing and repairing of the enclosure including the plants 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.(2)Maintenance of blasting enclosure.-Blasting enclosure shall always be maintained in good condition and effective measure shall be taken to prevent dust escaping from such enclosures, and from apparatus connected therewith, into the air of any room.(3)Provision of separating apparatus.-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.(4)Provision of ventilating plant.-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 bag used for the settling of dust and every other filtering or setting device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or setting device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.(5)Operation of ventilating plant. - The ventilating plant provided for the purpose of sub-paragraph (4) 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 a blasting chamber, it shall be in operation even when any person is inside the chamber for the purpose of cleaning or repairs.

5. Inspection and examination.-(1) Every blasting enclosure shall be specially inspected by a competent person atleast 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.

(2)Particulars of the result of every such inspection, examination and test shall forthwith be entered in a register 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.

6. Provision of protective helmets, gauntlets and overalls.-(1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber whether in blasting or in any work connected therewith or in cleaning such a chamber, protective helmets of type approved by a certificate of the Chief Inspector, and every such person shall wear the helmet provided for this use while he is in the chamber and shall not remove it until he is outside the chamber.

(2)Each protective helmet shall carry a distinguish 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.(3)Each protective helmet when in use shall be supplied with clean and not

unreasonably cold air at a rate of not less than six cubic feet per minute.(4)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.

7. Precaution in connection with cleaning and other work.-(1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surrounding thereof or upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or 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.

(2)In connection with any cleaning operation referred to in clause 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.

8. Storage accommodation for protective wear.-Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by clause 5 shall be provided outside and conveniently near to 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.

9. Maintenance and cleaning of protective wear.-All helmets, gauntlets, overalls and other protective devices or clothing provided and worn for the purposes of this schedule shall be kept in good condition and so far as is used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, whenever practicable, be used for removing dust from such clothing and compressed air shall not be used for removing dust from any clothing.

10. Maintenance of vacuum cleaning plant.-Vacuum cleaning plant used for the purpose of this schedule shall be properly maintained.

11. Restrictions in employment of young persons.-(1) 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 in maintenance or repair work at such apparatus, enclosure or plant.

(2)No person under 18 years of age shall be employed in 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.

12. Power to exempt or relax.-(1) 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 a 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 owning to the special condition 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 person impracticable or inappropriate, he may, with the previous sanction of the State Government, by an order in writing 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.

(2)Where an exemption has been granted under sub-clause (1), a copy of the order shall be displayed at a noticeboard 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

Lining 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 easily and conveniently be read by the persons employed.

(2)A copy of 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 effect of chrome on the skin shall be affixed in prominent position in every factory in which chrome solutions are used and such notices 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 "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 notices specified in paragraphs 1, 2 and 4 and if chrome solutions are used in the factory the contents of the notice specified in paragraph 3.

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

(a)waterproof footwear, leg coverings, aprons and rubber gloves for persons employed in processes involving contact with chrome solutions including the preparation of such solutions:(b)protective footwear, aprons and gloves for persons employed in the handling of hides or skins other than in processes specified in clause (a):Provided that gloves shall not be required for persons fleshing by hand or where there is no risk of contact with lime, sodium sulphide or other caustic liquor.

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; a(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 cleaning 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 clock-room and (3) be placed under the charge of responsible person;(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, 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 work-room or shed in which hides or skins are stored, treated or manipulated.

5. First aid arrangements.-The occupier shall-

(a)arrange for an inspection of the hands of all persons coming into contact with chrome solution to be made twice a week by a responsible person;(b)provide and maintain a sufficient supply of suitable ointment and impermeable waterproof plaster in a box readily accessible to the workers and used solely for the purpose of keeping the ointment and plaster.

X

Printing Presses and Type Foundaries-Certain Lead Process carried therein

1. Exemption.-Where the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of persons employed, he may by a 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.-

"Lead Material"-means material containing not less than 5 percent of lead."Lead process" means.-(a)the melting of lead or any lead material for casting and mechanical composing; and(b)the re-charging of machines with used lead material or(c)any other work including removal of dross from melting pots, cleaning of plungers; and(d)manipulation, movement or other treatment of lead material."Efficient exhaust draught" means localised ventilation effected by heat or mechanical means, for the removal of 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 the efficient exhaust draught:-

(a)melting lead material, or slugs;(b)heating and material, so that vapour containing lead is given of;unless carried on in such a manner as to prevent free escape of gas, vapour, fume or dust into any place in which the work is carried on; orUnless carried on in electrically heated and thermostatic controlled melting pots. Such exhaust draught shall be effected by mechanical means and as contrived as to operate on the dust, fume, gas or vapour given of as closely as may be at its point of origin.

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

5. 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)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 the lead process is carried on shall be-

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

8. Mess-room.-There shall be provided and maintained for the employees in a lead process and remaining on the premises during the meal intervals, a suitable mess-room, which shall be furnished with sufficient tables and benches.

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)(i)a trough with a smooth impervious surface, fitted with a water-pipe with-out plug, and of sufficient length to allow at least two feet 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 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; or(b)a sufficient supply of clean towels made of suitable material, renewed daily with a sufficient supply of soap or other suitable cleansing material.

10. Medical Examination.-(a) Every person employed in a lead process shall be examined by a Certifying Surgeon within 14 days of his first employment in such processes and at intervals of not more than 3 months, and a record of such examination shall be entered by the Certifying Surgeon in the form of special certificate of fitness in Form no. 24.

(b)A health register containing names of all persons employed in a lead process shall be kept in Form no. 16.(c)No person after suspension shall be employed in a lead process without the written sanction from the Certifying Surgeon, entered in the health register.

11. Food, drinks, etc., prohibited in work-room.-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.

XI

Manufacture of Pottery.

1. Application-This Schedule shall apply to all factories where in manufacture and decoration of pottery as hereinafter defined, and the manufactures and process, named below are carried on:-

(a)Calcining, crushing, grinding sieving of flint or quartz;(b)Mixing of flint or quartz with clay or other materials in preparation of a pottery body;(c)Manufacture of lithographic transfers, frits or glazes for use in the manufacture or decoration of pottery; and(d)Processes incidental to the manufactures and processes mentioned above :Provided that these rules shall not apply to factories in which any of the following articles, but no other potteries are made:-(i)Unglazed or salt glazed bricks and tiles; or(ii)Architectural terra-cotta made from plastic clay, either unglazed or glazed with leadless glaze only :Provided further that these rules shall be in addition to and not in derogation of any of the provisions of the Factories Act, 1948 or any other rules made thereunder or any other Act or Rules.

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

(i)"Pottery" includes earthen ware, stone ware, porcelain, china tiles and any other articles made from clay or from a mixture containing clay and other materials;(ii)"Potter's Shop" includes all places where a pottery is formed by pressing or by any other process and all places where felting, shaping or other treatment of pottery articles prior to placing for the biscuit fire is carried on;(iii)"Fettling" includes scalloping, towing, sand-papering, sand-sticking and any other process of felting and cleaning of pottery;(iv)"Moist method" when this expression is used in relation to cleaning, means a method of cleaning in which damp saw-dust or other suitable damp material is used and which prevents dust from rising into the air during the cleaning process;(v)"Stopping of biscuit ware" means the filling up of cracks in ware which has been fired but to which glaze has not been applied.(vi)"Thimble picking" means the picking over, sorting or re- arranging for further use of thimbles, stilts, spurs, strips, saddles or any similar articles which has been used for the support of pottery articles during the process of glost firing.(vii)"Wedging of clay" means the treatment of clay which has not been pugged or rolled, by raising one piece of clay by hand arid bringing it down upon another piece; but does not include the process, frequently known as "slapping of clay" in which two pieces of clay each small enough to be held in one hand are slapped together;(viii)"Leadless glaze" means a glaze which does not contain more than one per cent of its dry weight of a lead compound calculated as led monoxide, when determined in the manner as specified in the definition of "low solubility glaze".(ix)"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 1,000 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 filtered. The lead salt contained in the clear filtrate shall then be precipitated as lead sulphide and weighed as lead sulphate;(x)"Ware cleaning" means the removal of surplus glaze from ware after the application of the glaze but before glost firing and includes panel-cutting;(xi)"Lithographic transfer making" includes the wiping of colour and subsequent brushing of transfer sheets;(xii)"Flint or quartz milling" includes the calcining of flint and the sieving, crushing, grinding or any other manipulation of flint and quartz in, or incidental to the manufacture of ground flint or quartz;(xiii)"Ground or powdered flint or quartz" does not include natural sands;(xiv)"Efficient exhaust draught" means localised ventilation effected by mechanical or other means, for the removal of gas, vapour, dust or fumes so as to prevent it from escaping into the air of any place in which work is carried on. No arrangement or device shall be deemed efficient which fails to remove effectively the gas, vapour, dust or fumes generated at the point where it originates, and which permits the substance removed to escape into or re-enter the same or any other work place either the directly or indirectly;(xv)"Damp fettling" means fettling done either-(a)wholly with a wet sponge or any other suitable wet material, or(b)while they were being fettled is still so damp that no dust is given off,(xvi)"Slip house" includes any place where plunging is carried on;(xvii)"Flintless stoneware" means stoneware the body of which consists of natural clay to which no flint or quartz or other form of free silica has been added;(xviii)"Flow material" means any material which contains a lead compound and which is placed in saggars with a view to its entire or a partial volatilisation during the glost firing of the ware;(xix)"Galena" means the native sulphide of lead containing not more than five per cent of soluble lead compound calculated as lead monoxide when determined in the manner described in the definition of low solubility glaze";(xx)"Glaze" does not include an engobe or slip;(xxi)"Glost placing" includes-(i)the placing of ware coated with unfired glaze on to cranks or similar articles prior to their transference to saggars, trucks, ovens or kilns for glost firing,(ii)the placing of such ware into saggars or on to trucks or on to oven-conveyors,(iii)the placing of saggars containing such ware into ovens or kilns or on to trucks, and(iv)the removal and carrying of saggars or cranks from the oven, kiln or truck after glost firing except in the case of tunnel ovens,

3. Exhaust Draught.-(1) The following processes shall not be carried on without the use of an efficient exhaust draught;

(i)all processes involving the manipulation or use of a dry and unfritted lead compound;(ii)fettling operation 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 effectively 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 tiles from clay dust, an exhaust opening being connected with each press, this clause shall also apply to the pressing from clay dust of articles other than tiles, unless the material is so damp that dust is given

of;(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 apply to the fettling or other articles made from clay dust, unless the material is so damp that no dust is given of;(vi)process of loading and unloading of saggars where handling and manipulation of ground and powered flint, quartz, alumina or other materials are involved;(vii)brushing of earthen ware 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 powered flint or quartz except where this is done in a machines so enclosed as to effectively prevent the escape of dust;(ix)ware cleaning after the application of glaze by dipping or other process;(x)crushing and dry grinding of materials for pottery bodies and saggars unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off;(xi)seiving or manipulation of powered flint, quartz, clay grong, or mixture of these materials unless it is so damp that no dust can be given off;(xii)grinding of tiles on a power driven wheel unless an efficient water spray is used on the wheel;(xiii)lifting and conveying materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air or near to any place in which persons are employed;(xiv)preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;(xv)mould making unless the bins of similar receptacles used for holding plaster of paris are provided with suitable covers;(xvi)manipulation of calcined material unless the material has been made and remains so wet that no dust is given off;(xvii)fettling other than damp fettling:(xviii)placing of china for the biscuit fire if alumina or other powdered material is used;(xix)emptying of china biscuit flatware from saggars after firing in alumina or other powdered materials;(xx)sieving of alumina or other powdered placing material;(xxi)processes using alumina or other powdered substance as placing materials;(xxii)polishing of ware;(xxiii)grinding of ware on a dry sand-stone wheel;(xxiv)sorting of glost ware with a power driven tool;(xxv)ground laying or colour dusting, or the wipping off of colour after either of those processes.(2)Every process for which an exhaust draught is required shall be carried on inside a suitable hold.(3)Air discharged from exhaust ventilating plant used in connection with any of the processes specified in clause 3(1) shall, whether or not it has been passed through dust collecting apparatus, be discharged directly into the open air from where it is not liable to be drawn into the air of any work-room.

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

(a)crushing and dry grinding or sieving of materials, fettling pressing of tiles, drying of clay and greenware, loading and un-loading saggars;(b)all process involving the use of a dry lead compound.

5. Every slip house shall for the purpose of excluding dust be effectively separated from-

(a)any place in which clay is dried;(b)any place in which clay is taken from a drier; and(c)any place in which the dry grinding or sieving of materials for pottery bodies is carried on.

6. Any glaze which is not a leadless glaze or low solubility glaze shall not be used in a factory in which pottery is manufactured.

7. No woman or young person shall be employed or allowed to work in any of the operations specified in clause 3 (1) or at any place where such operations are carried on in the following processes:-

(i)the wedging of clay:(ii)wheel turning for a thrower or wheel turning for pressing tiles;

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

9.

(1)All possible measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors and wall.(2)Damp saw dust or other suitable material shall be used to render the moist method effective in preventing dust arising into the air during the cleaning process which shall be carried out after work has ceased.(3)All materials for timble picking which is collected from floors or workbenches shall be riddled in an enclosed receptacle before it is taken to the place where thimple picking is to be done.(4)The following requirements shall apply to potter's shops and to any other place where clay is dried or clay dust is prepared:-All parts of beams, ledges, and fixtures, more than six feet six inches above the floor shall be cleaned at least once in every period of six months with an efficient vacuum cleaning apparatus or by some other effective and suitable method, and not by sweeping.

10.

(1)The floors of potters shops, slip houses, dipping houses, ware cleaning rooms, such drying stoves as are entered by work people and the floors of all places where sieving, crushing or grinding of flint and quartz is carried on shall:-(i)be smooth and impervious;(ii)be kept in good repair so that they can be properly cleaned by a moist method and so that no dust can fall through into any room below;(iii)be capable of being swilled or washed.(2)All the floors shall be cleaned either:-(i)daily by a moist or wet method after work has ceased for the day and two hours before the hour of starting of the work the following day, or(ii)daily with an efficient vacuum cleaner.

11.

(1)All persons employed in any process included under clause 3 shall be examined by the Certifying Surgeon within seven days preceding or following the date of their first employment in the factory in such process; thereafter all persons employed in any process included in sub-clauses (i) and (xiv) of clause 3 shall be examined by the Certifying Surgeon once in every three calendar months and those employed in any process included in sub-clauses (ii) to (xiii) and (xvi) of clause 3 once in every 12

months by the Certifying Surgeon. Records of such examinations shall be entered by the Certifying Surgeon in the Health Register.(1A)X'ray examination of the chest of every worker employed in any process specified in sub-clauses (ii) to (xiii) and (xv) and (xvi) of clause 3 shall be carried out:-(i)if he is already in employment the date on which this rule comes into force, within six months of the said date, and at an interval of every three years thereafter; and(ii)if he is employed after the date on which this rules comes into force, within six months of the said date, and at an interval of every three years thereafter.The result of every X'ray examination alongwith the X'ray plate shall be produced before the Certifying Surgeon within a month of the said examination.(1B)Without any prejudice to the provision of sub-clause (1 A) if the Certifying Surgeon during the course of the medical examination of any worker has any reason to suspect that the said worker had been affected or was being affected by any chest diseases he may direct the manager or the occupier in writing to get the said workers X'rayed and to produce the result of the X'ray examination alongwith X'ray plate within a specified time.(1C)If as a result of the general medical examination or of the X'ray examination, the Certifying Surgeon is of the opinion that any special or expert clinical or pathological or any other special examination or test is necessary to diagnose or to determine whether or not the worker had been affected or was being affected by any diseases arising out of his occupation or to protect the health of the worker, he may direct the manager or the occupier in writing to get any such examination or test carried out and to produce the report and the result thereof within a specified time.It shall be the duty or the manager of the occupier, as the case may be, to carry out the direction given by the Certifying Surgeon under sub-clause (1B) and (1C)(2)If at any time the Certifying Surgeon is of opinion that any person employed in any process specified in clause 3 is no longer fit for employment on the ground that continuance would involve damage to his health, he shall make an entry to that effect in the Health Register.(3)Any person who has been declared unfit by the Certifying Surgeon at any time shall not be re-employed without written sanction from the Certifying Surgeon and entered in the Health Register.(4)A worker declared unfit by the Certifying Surgeon may be employed only in such other process or works as may be specified by the Certifying Surgeon.

12.

(1)The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in processes included under clause 3.(2)The occupier shall provide and maintain suitable aprons of water-proof or similar materials, which can be sponged daily, for the use of the dipper, dipper's assistants, throwers, jolly workers casters, mould makers and filter press and pug mill workers.(3)No person shall be allowed to work in empting 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 which shall be supplied by the occupier.

13. Before each meal and before the end of the day's work at least ten minutes, in addition to the regular rest interval for meals, shall be allowed for washing to each person employed in any of the processes included under clause (3)

14. No food, drink, 'pan' and 'supari', or tobacco shall be brought into, or consumed by any worker in any work-place in which any of the processes included under clause 3 are carried on and no person shall remain in any such work-place during intervals for meals or rest.

15. There shall be provided and maintained for the use of all persons employed in any of the processes included under clause 3-

(a)a clock-room for clothing put off during working hours, it shall be outside any room in which is carried on any of the processes included under clause 3, and shall be enclosed from the general air of any such room.(b)separate and suitable arrangements for accommodation of protective clothing and equipment provided under clause 12.

16. Every drying stove, dryer and mangle shall be so ventilated that there is no flow of hot air from the stove, dryer or mangle into any place where any person works, the drying of pottery articles shall be carried out in rooms set apart for that purpose.

17. In all potter's shops and in all drying stoves which are entered by work people, boxes shall be provided for the reception of clay scraps and broken ware.

18. Washing facilities.-The occupier shall provide and maintain, in a cleanly state and in good repair, for the use of all persons employed in any of the processes specified in clause 3 a wash place under cover; with either:-

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

19. 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 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.(2)The room shall be adequately ventilated by the circulation of fresh air, placed under the charge of a responsible person and shall be kept clean.

20. If in respect of any factory the Chief Inspector of Factories is satisfied that 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 an order in writing exempt such factory from all or any of such provisions, subject to such conditions as he may specify therein. Such order may at any time be revoked by the Chief Inspector of Factories without assigning any reason.

XII

Manufacture of Articles from Refractory Materials

1. Application.-This Schedule shall apply to the following processes :-

(1)handling, moving, breaking, crushing, grinding or sieving of any refractory materials, containing not less than 25 per cent total silica for the purpose of manufacture -(a)of articles used in the construction of furnaces and flues;(b)of crucibles; and(c)of compositions or other materials used in the preparation of moulds in which metals are cast; or(2)any process in the manufacture of refractory bricks as hereinafter defined:Provided that nothing in this Schedule shall apply-(a)to handling, moving, mixing or sieving of natural sand; or(b)to the manipulation of rotten rock in the preparation of moulds used in metal foundries:Provided further that if the Chief Inspector of Factories is satisfied in respect of any factory or part thereof that owing to the special conditions of work or otherwise, any of the requirements of this Schedule can be suspended or relaxed without any danger to the health of the persons employed therein, he, may by an order in writing grant such suspension or relaxation for such period and on such conditions as he may think fit. Any such order may be revoked at any time.

2. Definitions.-(a) "Refractory material" means any refractory material containing not less than 25 per cent total silica.

(b)"Refractory brick" means any brick or article composed of refractory material and containing not less than 25 per cent total silica.(c)"Efficient exhaust draught" means localised ventilation by mechanical means for the removal of dust so as to prevent dust 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 the dust produced at the point where such dust originates.

3. No refractory material shall be broken in pieces by manual labour unless the process is carried out in the open air:

Provided that where it is not practicable to carry out this process in open air, the process shall be carried out under an efficient exhaust draught.

4. No refractory material unless it is so wet that dust will not be produced, shall be crushed or ground in a stone crushing or a grinding machine unless such machine is provided with-

(a)an efficient exhaust draught and efficient dust collecting appliances; or(b)an efficient water or steam spray:Provided that every grinding machine wherein any refractory material is ground in dry state, shall be, totally enclosed and connected to a mechanical exhaust system so as to prevent effectively and escape of dust outside the casting of the machine by maintaining a pressure below the atmospheric pressure within the casting of the machine;Provided further that all processes of crushing and grinding shall be effectively isolated from other processes.

5. All chutes, conveyors, elevators, screens, sieves and mixers used for manipulating refractory material shall, unless that material is so wet that dust will not be produced, be enclosed and be provided with efficient exhaust draught.

6. No refractory material so dry as to produce dust shall-

(a)be loaded into any wagon or other receptacle for transport unless it has been placed in a suitable dust-proof container so dumped as to preclude dust; or(b)be unloaded from any wagon or other receptacle for transport unless it has been so damped as to preclude dust or unless the work is done under an efficient exhaust draught;(c)be shovelled or raked or otherwise manipulated by means of hand tools in any manufacturing process unless it has been so damped as to preclude dust or unless the work is done under an efficient exhaust draught:Provided that paragraph (b) of this rule shall not apply to refractory material in the form of rock or pebbles before it is manipulated in any manufacturing process.

7. (a) The floors of all places where refractory bricks are dried, other than the floors of tunnel ovens or chamber dryers not normally entered by person employed shall after each lot of refractory bricks has been removed, be carefully cleaned of all debris and the part being cleaned shall be kept damp while the cleaning is being done;

(b)There shall be provided in every such place a constant supply of water laid on under adequate pressure with sufficient connections and a flexible branch pipe and sprinkler to enable water to be

supplied directly on part of the floor.

8. No drying stoves in which refractory bricks are baked by fires before being placed in the kilns shall be used.

9. The surface of every floor or place where persons are liable to pass shall be cleaned of debris of refractory material once at least during each daily period of employment or where shifts are worked, once during each shift. Such debris unless it is immediately required for use in the process shall be effectively damped and either be placed in covered receptacles, or be otherwise stored in such manner as to prevent the escape of dust into the air in or near to any place where any person is employed.

10. Where plates are used, whether portable or forming part of the floor, on which refractory bricks are dried, such plates shall freed from adherent material only by a wet method or by such other method as will prevent the escape of dust into the air.

11. The dust or powder of refractory materials shall not be used for sprinkling the moulds in refractory brick making:

Provided that nothing in this paragraph shall be deemed to prevent the use of natural sand for the purpose of sprinkling the moulds.

12. No worker shall be allowed to work on any dusty process or at any place where dust of any refractory materials is present in the atmosphere:

Provided that in an emergency, a worker may be allowed to work at such process or place if he wears a suitable and efficient dust mask or breathing apparatus.

13. Medical examination.-(a) Every worker employed on any of the processes specified in sub-paragraphs (1) and (2) of paragraph 1 shall be medically examined in such manner and at such intervals as may be specified by any rules made under the Workmen's Compensation Act, 1923 (VIII of 1923) or if no such rules have been framed under the said Act, every such worker shall be medically examined by the Certifying Surgeon before employment on any of the aforesaid processes and at intervals not exceeding six months thereafter.

(b)Subject to sub-paragraph (c), an X'ray examination of the chest of every worker referred to in sub-paragraph (a) shall be carried out-(i)if he is already in employment on the date of coming into force of the sub-paragraph, within six months of such date and at an interval of every three years thereafter;(ii)if he is employed after such date within one month of the date of his employment and at an interval of every three years thereafter;and the result of every such X'ray examination shall be produced before the Certifying Surgeon within a month of the examination.(c)If the Certifying Surgeon, during the course of medical examination of any worker under sub-paragraph (a), has reason to suspect onset of any chest disease, he may direct the manager or the occupier to get an X'ray examination of the worker done and to produce the X'ray plate before him within a specified time and on receipt of such direction the manager or the occupier, as the case may be, shall carry out the direction.(d)The Certifying Surgeon shall grant to each worker examined a certificate specifying therein whether or not the worker was considered fit to be employed on any of the aforesaid processes.(e)The manager shall maintain a register in which the findings and recommendations of the Certifying Surgeon in respect of every worker and in respect of every medical examination shall be maintained duly signed by the Certifying Surgeon.(f)A worker not declared fit shall not be employed on any of the aforesaid processes and he shall be employed on only such other process or he shall be subjected to such other examination or treatment as may be directed by the Certifying Surgeon.(g)No fees shall be charged from any worker for the medical examination and it shall be the responsibility of the occupier and the manager to comply with the provisions of this Schedule.

14. In case any existing plant or machinery needs alteration, modification or replacement or in case any new plant is required to be installed, to comply with the requirements of this Schedule, such alteration, modification, replacement or installation of the plant or machinery shall be carried on within a period not exceeding one year from the date of publication of this rule:

Provided that the Chief Inspector of Factories in consideration of special and exceptional circumstances by an order in writing may extend this period for such reasonable length of time as he may think fit.

XIII

Part I – Chemical Works

1. Application-This Schedule shall apply to all factories wherein, the operations specified in clause (13) of sub-rule (1) of Rule 95 are carried on. These rules shall be in addition to and not in derogation of any provisions of the Factories Act, 1948 or any other rules made thereunder, or any other Act or Rules.

2. Definitions.-In this Schedule, unless there is anything repugnant in the subject or context:-

(i)"Chemical works" means any factory or part of any factory in which any Chemical process is carried on;(ii)"Chemical process" means manufacture, recovery, handling or storing of chemicals or any other process in which any chemical is used;(iii)"Breathing apparatus" means a helmet of face-piece with necessary connections by means of which, a person using it in a poisonous, asphyxiating or irritant atmosphere breathes ordinary air, or any other suitable apparatus approved in writing by the Chief Inspector;(iv)"Life belt" means a belt made of leather or other suitable materials which can be securely fastend 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, and the stresses caused due to the impact caused by the fall of a man;(v)"Efficient exhaust draught" means localised ventilation effected by mechanical or other means, for the removal of gas, vapour, dust or fumes so as to prevent it from escaping into the air of any place in which work is carried on. No arrangement or device shall be deemed efficient which fails to remove effectively the gas, vapour, dust or fumes generated at the point where it originates, and which permits the substance removed to escape into or re-enter the same or any other work place either directly or indirectly;(vi)"Surgeon" means a Certifying Surgeon appointed under Section 10 of the Factories Act, 1948.(vii)"Suspension" means suspension by written certificate in the Health Register, signed by the Surgeon, from employment in any process mentioned in the certificate;(vii)"Bleaching powder" means the bleaching powder commonly called chloride of lime;(ix)"Chlorate" means chlorate or perchlorate;(x)"Caustic" means hydroxide of potassium or sod;um;(xi)"Caustic pot" means a metal pot fixed over a furnace or flue used for concentrating or boiling caustic liquor or any other liquor;(xii)"Chrome process' means manufacture of chromate or bichromate or potassium, or sodium, or the manipulation, movement or other treatment of these substances in connection with their manufacture and use;(xiii)"Notro or Amino process' means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosive with the use of any of these substances.

3. Exception. - If the Chief Inspector is satisfied in respect of any factory or any process that, owing to the special conditions or special methods of works, or for any other reason all or any of the requirements of this Schedule are not necessary for the protection of persons employed in any factory or process, he may by an order in writing exempt such factory or process from all or any of the provisions of this Schedule, subject to such conditions as he may by such order specify.

He may in his discretion at any time revoke whole or part of such order.

4. Register and records.-All registers and records required to be maintained under this Schedule shall be maintained in the factory in a suitable form or in such form as may be prescribed or directed by the Chief Inspector and shall be produced before an Inspector, whenever required to do so.

Part II – General

5. The provisions of Part II of this Schedule shall apply to all chemical works specified in Appendix I attached to the Schedule.

6. House keeping.-(a) Every part of the ways, works, machinery and plant shall be maintained in a clean and tidy condition.

(b)Any spillage of materials shall be cleaned up without delay.(c)Floors, platforms, stairways, passages and gangways shall be kept free of any obstruction whether permanent or temporary.(d)There shall be provided easy means of access to all parts of the plant and adequate and proper implements to facilitate cleaning, maintenance and repair.

7. Improper use of chemicals.-(a) No chemical or solvent shall be used by any worker for any purpose other than the process for which it is supplied.

(b)Workers shall be instructed on the possible dangers arising from such misuse. These instructions shall further be displayed in bold letters in prominent places in the different sections of the works.

8. Storage and use of food and testing of materials used in any chemical process.-(a) No food, drink, tobacco, "pan" or "Supari" or similar article shall be stored or consumed on or near any place where any chemical process is carried on.

(b)Workers shall be instructed on the possible dangers arising from testing of any material used in any chemical process or of the use for drinking purposes of any vessel or container used in, or in connection with any chemical process. These instructions shall further be displayed in bold letters in prominent places in the different sections of the work.

9. Process hazards.-(a) Before commencing any experimental work pilot project, or any new chemical process, adequate steps shall be taken to ascertain definitely all the hazards involved, both in actual operation and in the chemical reactions. The properties of the raw materials used, the final products to be made, the middle products and any bye-products arising shall be carefully studied and adequate precautions shall be taken for dealing with any hazards including effects thereof on the workers. In the design and layout of the buildings and plants, adequate provisions shall be made to guard against any hazards.

(b)The Chief Inspector shall be informed in writing about the commencement of the operation of any pilot or experimental plant or process, and safety of persons exposed to the hazards likely to arise therefrom mentioned in sub-clause (a) shall be ensured, and where necessary advice shall be obtained from the Chief Inspector on measures to be taken in this regard.

10. Unauthorised personnel.-(a) Unauthorised persons shall not be permitted to enter any section of a chemical works where there is any special danger.

(b)Visitors shall be provided, where necessary, with suitable safety equipments and shall be accompanied round dangerous plants by a responsible person of the factory.

11. Instruments.-All instruments, such as pressure gauges, thermometers, flow-meters, weighing machines, etc., shall be tested at regular intervals by a competent person and records of these tests shall be kept in a register.

12. Cocks and valves.-Suitable and easily accessible valves shall be provided in all service lines at sufficiently short intervals for convenience in blanking off etc. All cocks and valves shall be operated at least once in a month and tested periodically by a competent person, and records of these tests shall be kept in a register. A plan of all service installations shall be kept readily available.

13. Man-holes.-No man-holes shall be opened for entry until effective fencing has been erected round it.

14. Emergency instructions.-Special instructions in simple language shall be framed to ensure that effective measures may be carried out in cases of emergency, to deal with escape of inflammable poisonous or deleterious gases, vapours, liquids or dust. These instructions shall be further displayed in bold letters at prominent places in the different section of the works. All workers shall be trained and instructed in the action to be taken in such emergencies.

15. Protection of reaction mixtures.-Suitable arrangements shall be made to ensure that no foreign matter of any short can fall in to reaction mixtures.

16. Electrical apparatus.-Electrical plant, fittings and conductors shall, if exposed to a damp or corrosive atmosphere, be adequately protected. Periodic tests shall be carried out on all electrical circuits to detect any

defect or fault and any defect or fault detected shall be removed immediately.

17. Place of work.-(a) Workers shall be allowed only in those places in which they have been given orders to work.

(b)In dangerous sections of a factory the number of workers shall be kept to a minimum compatible with the process.

18. Packing, storage and transport of chemicals.-(a) Chemical shall be packed and stored in containers suitable for the purpose and of adequate strength for storage or transport. All such container shall be stored and transported in such a manner as to insure that, in the event of a spillage they will neither produce a reacting mixture, nor cause the development of toxic or fire risk in contact with other materials in its vicinity, or with walls, floors or dust therein.

(b)No corrosive chemical or substance shall be stored or transported except in containers of a suitable material upon which the corrosive substance may have no chemical action, of adequate strength and of suitable design and construction and no such container shall be transported, carried or moved from one place to other except in crates or receptacles of adequate strength and suitable design and construction.(c)Crates or receptacles for containers with a capacity of 11.5 litres (2.5 gallons) or more and containing any corrosive substance shall be transported or moved from one place to other on suitable rubber wheeled-trucks or trolleys or any other device approved by the Inspector:Provided that such containers, crates and receptacles may be carried manually by not less than two persons, at a height below the waste-line of the persons carrying and by means of a suitable and adequate device designed and constructed for the purpose.(d)On every container containing any chemical substance a table shall be securely affixed and attached mentioning clearly and legibly in bold letters the name of chemical:Provided that if there is any Indian standard of labelling of such containers the same shall be adopted.(e)If in the opinion of an Inspector the system of storage and transport of any chemical is not safe, he may direct such system and devices to be used as he may consider safe and desirable.Fire and Explosion Risk

19. Isolation of building and site and fire resistance.-(a) Buildings and plants shall be sited with due regards to the dangers which may arise from the processes involved and in particular shall be spaced at distance which are deemed safe for the fire and explosion risk connected with the processes in adjacent buildings. Consideration shall be given to the effect of any process carried out in adjacent factories or plants.

(b)Where special dangers exist separate buildings shall be used for the different parts of a process. They shall be spaced at sufficient distances apart and shielded to prevent damage to each other on

the event of fire or explosion, and shall be safe-guarded by the provision of suitable blow-out panel or roofs. Where the risk of fire or explosion is considerable, the building shall be divided by blast or protective screen walls.(c)No combustible materials shall be used in the erection of working buildings, unless there are special reasons necessitating their use, in which case they shall be of light fire resistant construction, and floors shall be of impervious fire-resistant material and shall be regularly maintained in such condition.

20. Dangers of ignition (including lighting installation).-(a) No internal combustion engine, and no electric motor or other electric equipment, capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone. Electric conductor shall be encased in screwed steel conduit

(b)All hot exhaust pipe shall be installed outside building and other hot pipes inside the plant be suitably protected.(c)Portable electric lamps shall not be used, unless of an intrinsically safe type, and portable electric tools connected by flexible wires shall not be used unless of the flame proof type.(d)Where an inflammable atmosphere may occur, the soles of foot-wear worn by workers shall have no metal on them, and the wheels of trucks, or coveyors shall be of a material which shall be a good conductor and non sparking. Adequate precautions shall be taken to prevent the ignition of explosive or inflammable substances by sparks emitted from locomotives or other vehicles operated in the factory or on public lines.(e)No electric or lamp or naked light, fixed portable, shall be used, and no person shall have in his possession any match or any apparatus of any kind for producing a naked light or spark in, or on, or about any part of the factory, where there is any likelihood of fire or explosion from inflammable gas, vapour or dust, and all incandescent electric lights in such parts shall be in double air light glass covers.(f)Prominent notice in the language understood by the majority of the workers and legible by day and by night, prohibiting smoking, the use of naked lights and the 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 any risk of fire or explosion from inflammable gas, vapour or dust. In the case of illiterate workers the contents of the notices shall be fully and carefully explained to them when they commence work in the factory for the first time and again when they have completed one week at the factory.(g)A sufficient supply of spades, scrapers and pails made from non-sparking materials shall be provided for the use of persons employed in cleaning out or removing residue from any chamber, still, tank or any other vessel wherein there may be risk of ignition or explosion, or in cleaning or removing any substance which may cause evolution of arseniuretted hydrogen or any other substance which may be inflammable or likely to cause explosion, and in no case any tool other than non-sparking tool shall be used on any such work or, while undertaking any repair or maintenance work at any such place or plant.Note.-The risk is not always obvious and may arise, for example through the production of hydrogen or other explosive substances in acid tanks.

21. Static electricity and tightening protection.-(a) All pipe lines and belts and other machinery and plants on which static electricity is likely to accumulate, shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to the earthed supply tanks to prevent sparking of static electricity. Where necessary humidity shall be controlled.

(b)Mobile tank 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 place.(c)Lightening protection apparatus shall be fitted where necessary, and shall be maintained in good condition.

22. Process heating-The method of providing heat for a process shall be as safe as possible and where the use of naked flame is unavoidable the plant shall be so constructed as to prevent any escaping inflammable gas, vapour, or dust coming into contact with the flame, or exhaust gases, or other hot agency likely to cause ignition and, unless impracticable, the heating medium shall be automatically controlled at a pre-determined temperature below the danger temperature.

23. Escape of materials.-(a) Provision shall be made in all plants, sewers drains, flues, ducts, culverts and burned pipes to prevent the escape and spread of any liquid, gas, vapour, fume or dust likely to give rise to fire or explosion, during normal working, cleaning or overhauling or in the event of accident or emergency.

(b)If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluent shall be trapped and rendered safe outside the danger area.

24. Leakage of inflammable or dangerous liquids.-Provision shall be made to confine by means of bund, walls, sumps, etc., possible leakages from vessels containing inflammable or dangerous liquids.

Adequate and suitable fixed fire fighting appliances shall be installed in the vicinity of such vessels.

25. Cleaning of empty containers and storage of combustible materials. - (a) All empty containers which have held any inflammable or poisonous material and metal containers which have held sulphuric acid shall be rendered permanently and completely safe and shall not be repaired, or destroyed; until their cleaning in such manner as to make them completely and permanently safe has been completed.

(b)Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition.(c)Rubbish shall be removed from buildings without delay and placed in special metal containers provided with close fitting lids. The contents shall be removed daily and suitably dealt with. Waste products containing inflammable or explosive materials shall not be placed on rubbish heaps but shall be destroyed in an appropriate manner.

26. Installing of pipe lines for inflammable liquids.-All pipe lines for the transport of inflammable liquids shall be protected against damage or breakage, shall be arranged so that there is no risk of mechanical damage from vehicles and shall be so laid that, they drain throughout without the collection of deposits at any part. All flanged joints, bends and other connections shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein. The open and closed positions of all cocks and valves shall be clearly indicated on the outside.

27. Packing of reaction vessels.-Packing and jointing materials for reaction vessels (including covers, man-hole covers, and exhaust pipes) and in pipe lines and high or low temperature insulating materials shall not contain materials which are combustible or which react with the products of the plant.

28. Safety valves.-Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is likely to rise to a dangerous degree, shall have attached to it a pressure gauge and a proper safety valve or other equally efficient means to relieve the pressure maintained in good condition. But this will not apply to metal bottles or cylinders used for the transport of compressed gases.

29. Vigorous or delayed reactions.-Suitable provision, such as, automatic and distant control shall be made for controlling the effects of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be provided for in the event of an accident.

30. Examination, testing and repair of plant.-Examination, testing and repair of plant parts which have been in contact with explosive and inflammable material or which is under pressure, shall be carried out only under proper supervision.

31. Alarm systems.-(a) Gravity or pressure-feed systems for supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems automatic cut-offs of other devices to prevent overcharging or otherwise endangering the plant.

(b)The amount of inflammable material taken into a building in bulk containers shall be kept as low as practicable at any one time.(c)Adequate steps shall be taken to prevent the escape of inflammable and explosive vapours from any container into the atmosphere of any building.Gas, Vapour, Fume or Dust Risks.

32. Escape of gases, etc.-(a) Effective steps shall be taken to prevent the escape of dangerous gases, vapours, fumes or dust from any part of the plant, by total enclosure of the process involved or by provision of efficient exhaust draught. Effective arrangements shall be made to ensure that in the event of failure of the control measure provided in compliance of the foregoing, the process shall stop immediately.

(b)In the event of any such escape, provision shall be made to trap the materials and render them safe.

33. Danger due to effluents.-(a) Adequate precautions shall be taken to prevent the mixing of effluents which may cause dangerous or poisonous gases to be evolved.

(b)Effluents which may contain or give rise to such gases in the presence of other effluents shall be provided with independent drainage system to ensure that they may be trapped and rendered safe.

34. Staging.-(a) Staging shall not be erected over any open vessel unless the vessel is so constructed and ventilated as to prevent the emition of vapour or fumes about such staging.

(b)Where such staging is provided to give access to higher level in large plants, effective means shall be provided at all levels with direct means of access to the outside of the room or building and thence to ground level.(c)Such staging shall be fitted with suitable hand-rails and toe-boards and the floors and staging shall be impervious and easily cleanable.

35. Instruction as regards risk.-Before commencing work, every worker shall be fully instructed on the properties of the materials they have to handle and of the dangers arising from any gas, fumes, vapour or dust which may be evolved during the process. Workers shall also be instructed in the measures

to be taken to deal with the escape of such gas, fumes or vapours in the event of emergency.

36. Breathing apparatus.-(a) There shall be provided in every factory where dangerous gas of fume is liable to escape a sufficient supply of-

(i)Breathing apparatus of an approved make for the hazards involved,(ii)Oxygen and suitable means of its administration, and(iii)Life-belts.The breathing apparatus and other appliances required by this clause shall be maintained in good order and kept in an ambulance-room or in some other suitable place; which shall be within easy approach, and inspected once in every month by a competent person, appointed in writing by the occupier and a record of their condition shall be entered in a register provided for that purpose;Provided that the Inspector of Factories may direct to keep the breathing apparatus and other appliances at such convenient place as he may consider suitable.(b)Worker shall be trained, and given a periodic refresher course, at least once in every five months in the use of breathing apparatus and respirators.Respirators shall be kept properly labelled in clean dry light proof cabinets, and if liable to be affected by fumes, shall be protected by suitable containers. Respirators shall be dried and cleaned after use and shall be periodically disinfected.

37. Treatment of persons.-In every room or place where there is any danger of gassing and burns, there shall be a fixed official cautionary notice regarding gassing and burns. Such notices shall be legible by day and by night and shall be printed in the language understood by the majority of the workers.

38. Personnel protection equipment.-(a) Suitable protective clothing shall be provided for the use of operatives:-

(i)when operating valves or cocks controlling fluids which by their nature, pressure or temperature would be dangerous if a blow out occurred or when cleaning chokes in systems containing such fluids if pressure is likely to exist behind the chokes,(ii)when there is danger of injury by absorption through the skin during the performance of normal duties or the event of emergency,(iii)when there is any risk of injury while handling corrosive substances, hot or cold articles, or sharp or rough object, and(iv)when there is any risk of poisonous materials being carried on their clothes.(b)There shall be provided for the use of persons employed in the processes specified in Appendix II of this Schedule an adequate supply of such suitable protective equipments as indicated in the said appendix.Respirators shall be of a type suitable for the process for which they are to be used, provided that the Inspector may, by an order in writing, direct that a particular type of respirator or any other equipment shall be used for a particular process.(c)Protective equipments shall be provided and stored in an appropriate place and in a manner so that they may, be easily accessible and readily available without any unnecessary delay, whether for normal use or for use during abnormal conditions and emergencies.(d)Arrangements shall be made for the proper and efficient cleaning of all such protective equipments.

39. Cloak-rooms.-There shall be provided and maintained for the use of all persons employed in the processes specified in Appendix II to this Schedule a suitable cloak-room, for clothing put off during working hours and a suitable place, separate from the cloak-room, for the storage of overalls or working clothes. The rooms provided shall be placed in the charge of an attendant and shall be kept clean.

40. Special bathing accommodation.-Without prejudice to the requirements of rule 63 of the Bihar Factories Rules, 1950 there shall be provided and maintained by the occupier for the use of persons employed in the processes specified in Appendix III to this Schedule, specifically allocated washing and bathing facilities. The washing and bathing facilities shall satisfy the following requirements:-

(a)Basins and troughs shall have smooth impervious upper surface and be fitted with waste pipe and plug and shall have supply of running water laid on and available at all times. Every trough shall have a supply of running water laid on at points above the trough at intervals of not less than two feet and available at all times.(b)Basins and troughs shall be sufficient in number to provide at least one unit for every ten workers. For calculating the number of units required the remainder left after dividing the number of workers by ten shall be counted as ten. For the purposes of this clause a unit means one basin or two feet of length of a trough or in the case of circular or oval troughs two feet of the circumference of a trough.(c)There shall be at least one enclosed bath room with a tap on a stand pipe or shower with soap and towel for every ten persons and the running water supply shall be capable of yielding at least ten gallons a day for each person, which shall be available at all times.

41. Entry into vessels.-Before any person enters, for any purpose except that of rescue, any absorber, boiler, culvert, drain, flue, gas purifier, sewer, still, tank, tower, vitriol chamber or any other place where there is reason to apprehend the presence of dangerous gas or fume, a responsible person, appointed in writing by the occupier or the manager for the purpose,shall personally examine such place and shall certify in writing in a book kept for the purpose either that such place is isolated and sealed from every source of such gas or fume and is free from danger or that it is not so isolated and sealed and is free from danger. No person shall enter any such place which is not certified to be so isolated and sealed and free from danger unless he is wearing a breathing apparatus, and (where there are no cross stays or obstructions likely to cause entanglement) a life-belt, the free end of the rope attached to which shall be left with a man outside, whose sole duty shall be to keep watch and to draw out, the worker, if he appears to be affected by

gas or fume. The belt and rope shall be so adjusted and worn that the wearer can be drawn up head foremost through any man-hole or opening. Similar precautions shall be taken in case of a person entering for the purpose of rescue any such place for which a clearance certificate has not been issued.

42. Examination and repair of plant.-Where poisonous materials are likely to be present the examination and repair of plant and piping shall only be done under the supervision of a competent person and after the plant and piping has been thoroughly cleaned and ventilated. When opening-vessels and breaking joints in pipe lines, respirators, goggles and protective clothing shall be worn to the extent required by the competent person.

43. Storage of acid carboys.-Carboys containing nitric acid or "Mixed" acid shall be stored in open-sided sheds detached from other buildings, and placed on a flooring of sand-stone, brick, or other suitable inorganic material. A passage-way shall be provided and kept free from obstruction between every four rows of such carboys. An ample supply of water shall be available for washing away split acid and all necessary precautions shall be taken to prevent workers being exposed to fumes.

Corrosive or Deleterious Substances Risks

44. Buildings.-All buildings and plants shall be sited with due regard to possible dangers from accidental liberation or splashing of corrosive and deleterious liquids, and shall be so designed as to facilitate through washing and cleaning. The construction of staging and other parts of buildings shall be carried out with materials impervious and resistant to corrosion so far as practicable.

45. Leakage.-(a) All plants shall be so designed and constructed as to obviate the escape of corrosive liquid, where necessary, separate buildings, rooms or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localise any escape of liquids.

(b)Catch pits and bund walls shall be provided or other suitable precautions shall be taken to restrict the serious effects of such leakages. Catchpits shall be placed below joints in pipe-lines where there is danger involved to maintenance and other workers from such leakage.(c)Passages and work-stations shall not be situated directly below any part of plant where there is risk of escape of

dangerous liquid. Access to such parts shall so far as practicable, be prohibited, and danger notices shall be affixed at suitable points.

46. Precautions against escape.-Adequate precautions shall be taken to prevent the escape of corrosive or deleterious substances and means shall be provided for rendering safe any such escape.

47. Drainage.-Adequate drainage shall be provided and shall lead to special treatment tanks where deleterious material shall be neutralised or otherwise rendered safe, before it is discharged into ordinary drains or sewers.

48. Covering of vessels.-(a) No worker shall be allowed to climb over any fixed vessel or structure containing any dangerous material, which is not so covered as to eliminate any risk of accidental immersion in it of any portion of the body of a worker. Such vessels and structures shall be so constructed that there is no foothold on the top or the sides.

(b)Such vessel, shall unless its edge is at least three feet above the adjoining ground or platform, be securely fenced to a height of at least three feet above such adjoining ground or platform.(c)No plank or gangway shall be placed across or inside any such vessel, unless such plank or gangway is at least 18 inches wide and is securely fenced on both sides by rails spaced 9 inches apart to a height of at least three feet, or by other equally efficient means.(d)Where such vessels adjoin and the space between them clear of any surrounding brick or other work, is not securely fenced on both sides to a height of at Iea6t three feet, secure barriers shall be so placed as to prevent passage between them:Provided that sub-clause (b) of this clause 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.

49. Ventilation.-Adequate ventilation shall be provided and maintained at all times in rooms or buildings where dangerous gas, vapour, fume or dust may be evolved.

50. Means of escape.-Adequate means of escape from rooms or buildings in the event of leakage of corrosive liquid shall be provided and maintained.

51. Treatment of personnel.-In all places where strong acids or other corrosive liquids are used-

(a)there shall be provided for use in an emergency-(i)adequate and readily accessible means of drenching with cold water persons, and the clothing of persons, who may get splashed with such liquid;(ii)adequate and special arrangements to deal with any person who has been splashed with

poisonous material that can be absorbed through the skin;(iii)sufficient number of eye-wash bottles, filled with distilled water or other suitable liquid, kept in boxes, or cupboard conveniently situated and clearly marked by a distinctive sign which shall be visible at all times.(b)Except where the manipulation of such corrosive liquids is so carried on as to prevent risk of personal injury from splashing or otherwise, there shall be provided for those who have to manipulate such liquids sufficient and suitable goggles and gloves or other suitable protection for the eyes and hands. If gloves are provided they shall be collected, examined, and cleansed at the close of the day's work and shall be repaired or renewed whenever necessary

52. Maintenance.-(a) Before any examination or repair is carried out on a plant or a pipe-line a competent person shall issue a clearance certificate permitting such examination or repair.

(b)Adequate precautions shall be taken to liberate any pockets of gas or liquid which may have been formed in pipe-lines, and which may cause spray of the gas or the liquid at the point where dismantling takes place.[52A. Permissible levels in work environment.-Permissible levels of certain chemical substances in work environment.-With prejudice to the requirements in any other provisions in the Act or the rules, the following requirements with respect to permissible levels of certain chemical substances in work environment shall apply to all chemical work:] [Inserted by S.O 686 dated 18.6.1988.](i)Definitions.-For the purpose of this clause-(a)"mg/m3" 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 a substance per million parts of air 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 weightage to the duration for which each such sample is collected and the concentration prevailing at the time of taking the sample.

The weighted average concentration $\frac{C_1T_1 + C_2T_2 \ldots C_nT_n}{T_1 + T_2 \ldots T_n}$

Where C/1 represents the concentration of the substance for duration T/1 (in hours).C/2 represents the concentration of the substance for duration T/2 (in hours); and C/n represents the concentration of the substance for duration T/n (in hours).(e)"Work location" means a location in a factory at which a worker workers or may be required to work at any time during any shift on any day.(ii)Limits of concentrations of substances at work locations.-The time weighted average concentration of any substance listed in Table 1 or 2 of the clause, at any work vacation in a factory during any shift on any day shall not exceed the limit of the permissible time weighted average concentration specified in respect of that substance;(iii)In the case of substance mentioned in Table 1 in respect of which a limit in form of short term maximum concentration is indicated, the concentration of such a substance may exceed the permissible limit of the time weighted average concentration for the substance for short periods not exceeding 15 minutes at time, subject to the

condition that-(a)Such periods during which the concentration exceeds the prescribed time weighted average concentration are restricted to not more than 4 per shift;(b)the time interval between any two such periods of higher exposure shall not be less than 60 minutes; and(c)at no time, the concentration of the substance in the air shall exceed the limit of short term maximum concentration.(iv)In the case of any substance given in Table 3, the concentration of the substance at any work location in factory at any time during any day shall not exceed the limit of exposure for substance specified in the table.(v)In the cases where the word "skin" has been indicated against certain substances mentioned in Tables 1 and 3 appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin, mucous, memberances, and eyes as the limits specified in these, tables are for conditions where the exposure is only through respiratory tract.(vi)In case; the air at any work location contains a mixture of such substance mentioned in tables 1,2 and 3 which have similar toxic properties, the time weighted concentration each of these substances during the shift should be such, that when these time weighted concentration divided by the respective permissible time weighted average concentration specified in the above mentioned tables, are added together, the total shall not exceed unity.C1+C2.....Cn shall not exceed unity when Cl, C2.....L1..... L2 .....Ln.....Cn are the time weighted concentration of toxices, substances 1, 2, ... and respectively determined after measurement at work location.and L1, L2.....Ln are the permissible time weighted average concentration of the toxic substances 1, 2.....and respectively.(vii)In the case the air at any work location contains a mixture of substances, mentioned in Tables 1, 2 and 3 and these do not have similar toxic properties, then the time weighted concentration of each of these substances shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substances:Provided that the requirements in sub-clauses (vi) and (vii) shall be in addition to the requirements in sub-clauses (ii), (iii) and (iv).(viii)Sampling and evaluation procedures.-(a) Notwithstanding provisions in any other paragraphs, the sampling and evaluation procedures to be adopted for checking compliance with the provisions in the clause shall be as per standard procedures in vogue from time to time or as approved by the Chief Inspector.(b)Notwithstanding any other provisions the following conditions regarding the sampling and evaluation procedures relevant to checking compliance with the provisions in the clause are specified;-(A)For determination of the number of particles per cubic meter samples are to be collected by standard or midget impinger and the counts made by light-field technique.(B)The percentage of quartz in the 3 formula given in item 1 (a) (i) of Table 2 is to be determined from air borne samples.(C)For determination of number of fibres as specified in item 2 (a) of Table 2, the memberances filter method at 430 x phase contrast should be used.(D)Both for determination of concentration and percentage of quartz for use of the formula given in item 1(a)(i)(2) of Table 2, the fraction passing through a size selector with the following characteristic should only be considered.

Aerodynamicdiameter(Unit density sphare).		Percentage allowed bySize-selector.
2.0	...	... 90
2.5	...	... 75
3.5	...	... 50
5.0	...	... 25
10.0	...	... 0

(ix)Power to require assessment of concentration of substance.-(a) An Inspector may by an order in writing direct the occupiers or manager of factory to get before any specified date, the assessment of the time weighted average concentration at any work location at any of the substances mentioned in Tables 1, 2 or 3 carried out.(b)The results of such assessment as well as the method followed for air sampling and analysis for such assessment shall be sent to the Inspector within 3 days from the date of completion of such assessment and also a record of the same maintained in the bound register and kept readily available for inspection by an Inspector.(x)Exemption.-If in respect of any factory or a part of factory, the Chief Inspector is 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 exposed, in the air at the work locations, to a substance or substances specified in Tables 1, 2 or 3 to such an extent as is likely to be injurious to his health, he (the Chief Inspector) may by an order in writing exempt the factory or part of the factory from such requirements, subject to such conditions, if any, as he may specify therein.Table 1

Substance	Permissible limits of exposure			
Time weighted average concentration.		Short-term maximum Concentration.		
ppm	mg/mp3	ppm	mg/mp3	
1	2	3	4	5
Acetic Acid	10	25	15	7
Acrolein	0.1	0.25	0.3	0.8
Aldrin (Skin)	-	0.25	-	0.75
Ammonia	25	18	35	27
Anilink (Skin)	2	10	5	20
Anilidine (Opisomers Skin)	0.1	0.5	-	-
Arsenic & Compounds (as As)	-	0.2	-	-
Benzene	10	30	-	-
Bromine	0.1	0.7	0.5	2
2 Butanone (Mothylethy Ketone MEK)	200	590	300	885
n-Butyle acetate	150	710	200	950
Sectert. Butyl acetate	200	950	250	1190
Cadmium dust and salts (as CD)	-	0.05	-	0.2
Calcium Oxide	-	2	-	-
Carbaryl (Sevin)	-	5	-	10
Carbofuran (Furadan)	-	0.1	-	-
Carbon disulfied (Skin)	20	60	30	90
Carbon monoxide	50	55	400	440
Carbon tetrachloride (Sr)	10	65	20	130
Carbonyl chloride (phosgene)	0.1	0.4	-	-
Chlordane (Skin)	-	0.5	-	2

Chlorobenzene (onochlors-bezene)	75	350	-	-
Chlorine	1	3	3	9
bis-Chloromethyl ether	0.001	-	-	-
Chromic acid and chromites (as Cr.)	-	0.05	-	-
Chromium, Sel. Chormic Chromous	-	0.5	-	-
Salts (as Cr.)	-	-	-	-
Copper Fume	-	0.2	-	-
Cotton dust raw	-	0.2	-	0.6
Cresol, all isomers (Skin)	5	22	-	-
Cyanides (as Ch)-(Skin)	-	5	- -	
Cyanogen	10	20	-	-
DDT (Dichloridiphenyl trichloroethane)	-	1	- 3	
Demeton skin	-	0.1	0.02	0.3
Diazinon-skin	-	0.1	-	0.3
Dibutyle Phthalate	-	5	-	10
Dichlorves (DD VP)-skin	0.1	1	0.3	3
Dield-rin-skin	-	0.25	-	0.75
Dinitre benzene (all isomers-skin)	0.15	1	0.5	3
Dinitootoluene-skin	-	1.5	0.6	4
Diphenyl	0.2	1.5	0.6	4
Endrin-skin	-	0.1	-	0.3
Ethyl acetate	400	1000		
Ethyl amine	10	18	-	-
Ethyl alcohol	1000	1900	-	-
Fluorides (as F)	-	2.5	-	-
Flourine	1	2	2	4
Hydrogen cyanide-skin	10	11	15	16
Hydrogen sulfide	10	15	15	27
Iron oxide from (FEg Os as Fe)	-	5	-	10
isommyl acetate	100	525	125	655
Isobutyl alcohol	50	150	75	225
Isoamyl alcohol	100	360	125	450
Lead, inorg, fumes and dust (as Pb)	-	0.15	-	0.15
Linda-he-skin	-	0.5	-	1.5
Malathoion-skin	-	10	-	-
Manganese fume (as Mn)	-	-	1	3
Mercury (as Hg)	-	0.05	-	0.15

Mercury (vaidyl compounds skin) (as Hg)	0.001	0.01	0.003	0.03
Methyl alcohol (methenol) skin	200	260	250	310
Methyl collosove-skin (2-methoxy ethanol)	25	80	35	120
Methyl isobutyl Ketone-skin	100	410	125	510
Napthalene	10	50	15	75
Nickel corbony (as Ni)	0.05	0.35	-	-
Nitric acid	2	5	4	10
Nitric Oxide	25	30	35	45
Nitrobenzine-skin	1	5	2	10
Oil mist-mineral	-	5	-	10
Parathion-skin	-	0.1	-	0.3
Phenel-skin	5	19	10	38
Phroate (Thimet)-skin	-	0.65	-	-
Phosgene (Carbonyl chloride)	0.1	0.4	-	-
Phosphine	0.3	0.4	1	1
Phosphorus (Yellow)	-	0.1	-	0.3
Phosphorus pentachloride	-	1	-	3
Phosphorus trichloride	0.5	3	-	-
Picric acid-skin	-	0.1	-	0.3
Peyridine	5	15	10	30
Sila-ne (Sillicon tetrahydrine)	0.5	0.7	1	1.5
Styrene, monomer (pheny-othylene)	100	420	125	525
Sulfer dioxide	5	15	-	-
Sulfuric acid	-	1	-	-
Toluene (toluo) skin	100	375	1545	560
O-Toludine	5	22	10	44
Trichloroethylene	100	535	150	800
Vinyl chloride	5	10	-	-
Welding Fume (NOC)	-	5	-	-
Xylene (o-m-pisomers) skin	100	435	150	655

Table 2

Substance	Permissible time-weighted average concentration.
1	2
1. Silica-	
(a) Crystalline-	
(i) Quartz-	

(1) In terms of dust count {|
1060% Quartz + 10| mppCm
|-| (2) In terms of respirable dust||
10% respirable quartz + 2| Mg/m3
|-| (3) In terms of total dust||
30% quartz - 3| Mg/m3
|-| (ii) Cristobalite| ...| Half the limits given against quartz.|-| (iii) Tridymite| ...| Half the limits given against quartz.|-| (iv) Silica fused| ...| Same limit as for quartz.|-| (v) Tripoli| ...| Same limit as in formula in item 2 given against quartz.|-|| ...| 750 mppcm.|-| 2. Lilicate having less than 1% free silca by weight-|||-| (a) Asbestos-fibres longer than 5microns-|||-| (i) Amosite| ...| 0.5 fibre/cubic centimeter.|-| (ii) Chrysolite| ...| 2 fibres/cubic centimeter.|-| (iii) Crocidolite| ...| 0.2 fibre/cubic centimeter.|-| (iv) Other form| ...| 2 fibres/cubic centimeter.|-| (b) Mica| ...| 705 mppcm.|-| (c) Mineral wool fibre| ...| 10 mg/m3|-| (d) Porlite| ...| 1060 mppcm.|-| (e) Portland cement| ...| 1060 mppcm.|-| (f) Soap stone| ...| 705 mppcm.|-| (g) Talc (non-abosti form)| ...| 705 mppcm.|-| (h) Talc (fibrous)| ...| Same limit as for asbestos.|-| (i) Tromolite| ...| Same limit as for asbestos.|-| 3. Coal dust-|||-| (1) For air born dust having lessthan - 2mg/m3|| 5% silicon dioxide by weight.|-| (2) For air-borne dust havingover 5% silicon dioxide.|| Same limit as prescribed by formula item (2) against quartz.|}

Table 3

Permissible limit of exposure.

Substance		PPM	mg/m3
1		2	3
Acetic an-hydride	...	5	20
O-Dichlorobenzene	...	50	300
Formaldehyde	...	2	3
Hydrogen Chloride	...	5	7
Manganese 1 Compounds (as Mn)	...	...	5
Nitrogen-dioxide	...	5	9
Nitroglycerin-skin	...	02	2
Potassium hydroxide	...	...	2
Sodium hydroxide	...	...	2
2, 4, 6-Trinitrotoluent (TNT)	...	...	0.5

Welfare

53. Washing facilities.-(a) There shall be provided and maintained in every chemical works 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.

(b)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 woman only" and shall also be indicated pictorially.

54. Lunch room facilities.-In every chemical works there shall be provided and maintained for the use of those remaining on the premises during the rest intervals, suitable and adequate lunch room which shall be adequately furnished and shall have sufficient drinking water supply.

55. Medical Examination.-(a) The provisions of sub-clauses (b), (c), (d) and (e) shall apply in respect of the following processes:-

(i)Manufacture, processing, handling, or use of Hexa ethyl tetra phosphate, Tetra ethyl pyro phosphate, Mercury derivatives, o.o. Diethyl o. p-nitrophenyl, Thiophosphate (parathion), Nicotine, Nicotine sulphate, Methyl bromide, Cyandies Arsenical derivatives.(ii)Chrome processes.(iii)Nitro or Amino processes.(b)Every person employed in any process specified in sub-clause (a) of this clause shall be examined by the Certifying Surgeon once in every three months on a date or dates of which due notice shall be given to all concerned and records of such examinations shall be maintained in the Health Register.(c)No person shall be allowed to work unless a certificate of fitness has been granted after examination by the Certifying Surgeon and a signed entry made in the Health Register.(d)Every person so employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in clause (b) of this rule.(e)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 that process, for 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.Duties of Workers

56. Duties of workers.-(i) Every person employed shall-

(a)report to his Foreman any defect in any fencing, breathing apparatus, appliances or other requisite provided in pursuance of this Schedule, as soon as he becomes aware of such defect;(b)use the articles, appliances or accommodation required by this Schedule for the purpose for which they are provided;(c)wear the breathing apparatus and life-belt where required under this Schedule.(ii)No person shall,-(a)remove any fencing provided, unless duly authorised,(b)stand on the edge or on the side of any vessel to which clause 48 applies;(c)pass or attempt to pass any barrier erected in pursuance of clause 48;(d)place across or inside any vessel to which clause 48 applies any plank of gangway which does not comply with the schedule or make use of any such plank or gangway while in such position;(e)take a naked light or any lamp or matches or any apparatus for producing a naked light or spark into, or smoke in any part of the works where there is likelihood of explosion or fire from inflammable gas, vapour or dust;(f)use a metal spade scraper or pail which is not non-sparking when cleaning out or removing the residues from any chamber, still

tank or other vessel which has contained sulphuric acid or hydrochloric acid or other substance which may cause evolution of arseniurated hydrogen; or in which there is risk of ignition or explosion;(g)remove from a First-Aid box or cupboard or from the Ambulance room any First-Aid appliance or dressing, except for the treatment of injuries in the works.

Part III – 57. The provisions of Part III shall apply to all chemical works and parts thereof in which-

(i)caustic pots are used; or(ii)chlorate or bleaching powder is manufactured; or(iii) (a)gas tar or coal-tar is distilled, handled or used in any process of chemical manufacture; or(b)a nitro or amino process is carried on; or(c)a chrome process is carried on; or(iv)crude shell-oil is refined or processes incidental thereto are carried on; or(v)nitric acid is used in the manufacture of nitro compounds; or(vi)evaporation of brine in open pans and the stoving of salt are carried on; or(vii)manufacture or recovery of hydrochloric acid or any of its salts is carried on; or(viii)work at a furnace is carried on where the treatment of zinc ores is done; or(ix)insecticides mentioned in Appendix I are manufactured, mixed, blended or packed.

58. Entry in gas tar or coal-tar still.-Before any person enters a gas tar or coal-tar still for any purpose, except that of rescue it shall be completely isolated from adjoining tar stills, either by disconnecting-

(a)the pipe leading from the swan-neck to the condenser worm, or(b)the waste gas pipe fixed to the worm and/or receiver. In addition, blank flanges shall be inserted between the disconnected parts, and the paitch discharge pipe or cock at the bottom of the still shall be disconnected.

59. Entry into bleaching powder chamber.-No person shall enter a chamber for the purpose of withdrawing the charge of bleaching powder unless and until-

(i)the chamber is efficiently ventilated; and(ii)air in the chamber has been tested and found to contain not more than 2.5 grains of free chlorine gas per cubic foot of air.A register containing details of all such tests shall be kept in a suitable form or in a form approved by the Chief Inspector.

60. Special precautions for nitro processes.-In a nitro or amino process-

(a)if crystallised substances are broken or any liquor agitated by hand, means shall be taken to prevent as far as practicable, the escape of dust or fume into the air of any place in which any person is employed. The handles of all implements used in the operations shall be cleaned daily;(b)cartridges shall not be filled by hand, except by means of a suitable scope;(c)every drying stove shall be efficiently ventilated to the outside air in such a manner that hot air from the stove shall not be drawn into any work-room.(d)no persons shall enter a stove to remove the contents, until a free current of air has been passed through it;(e)every vessel containing nitro or amino

derivatives of phenol or of benzene or its homologues shall, if steam is passed into or around it, or if the temperature of the contents be at or above the temperature of boiling water, be covered in such a way that steam or vapour shall be discharged into the open air at a height of not less than 25 feet from the ground or the working platform, and at a point from where it cannot be blown back again into the work-room.

61. Precautions during caustic grinding, etc.-Every machine used for grinding or crushing caustic shall be enclosed; and an efficient exhaust draught shall be provided where any of the following processes are carried on:-

(i)Grinding or crushing of caustic;(ii)packing of ground caustic;(iii)grinding, sieving, evaporating or packing in chrome processes;(iv)crushing, grinding or mixing of material or cartridge filling in a nitro or amino process.

62. Chlorate manufacture.-(a) Chlorate shall not be crystallised, ground or packed, except in a room or place not used for any other purpose, the floor of which room or place shall be of cement or other smooth, impervious and incombustible material, and shall be thoroughly cleaned daily.

(b)Wooden vessels shall not be used for the crystallisation of chlorate, or to contain crystallised or ground chlorate; provided that this shall not prohibit the packing of chlorate for sale into wooden casks or other wooden vessels.

63. Restrictions on the employment of young persons and women.-(a) Persons under 18 years of age and women shall not be employed in any process in which hydrofloric acid fumes or ammonical vapours are given off or in any of the following operations:-

(i)evaporation of brine in open pans;(ii)stoving of salt;(iii)work at furnance where the treatment of zinc ores is carried on; and(iv)cleaning of work -room where the process mentioned in (iii) is carried on.(b)No person under 18 years of age shall be employed in a chrome process or in a nitro or amino process or in a process in which the carbon bi-sulphide, chlorides of sulphur, benzene, carbon chlorine compound or any mixture containing any of such materials are used or where the vapour of such materials is given off.

64. Duties of employees.-(a) Every worker shall use and wear the protective , clothing, foot-wear, respirators, goggles, gloves or other protective appliances provided under this Schedule and shall deposit the overalls or suits or working clothings so provided, as well as clothings put off during working hours, at the place provided under clause 39.

(b)Every worker employed in any process to which clause 40 applies shall carefully wash his hands and face before partaking of any food or leaving the premises.Appendix IAll chemical works in which-

1. Chemical processes relating to the following are carried on;-

(a)Carbonates, chromates, chlorates, oxides or hydroxides of potassium, sodium, iron, aluminium, cobalt, nickel, arsenic, antimony, zinc or magnesium,(ia)[Cadmium and salts, carbon disulphide, chlorides and chlorine and compounds, copper, cyanides, flourine and compounds, lead, Manganese, Mercury, Phosphorous and compounds,] [Inserted by S.O. 686 dated 13.7.1988.](ib)Oxides of Calcium, Iron, Nitrogen, Sulphur and Carbon and Silica, Asbestos, Mica Mineral Wool Prolite, Portland Cement, Soap Stone, Talcum, Tromolite, Coal.(b)Ammonia and the hydroxide and salts of ammonium,(c)Sulphurous, sulphuric, nitric, hydrochloric, hydrofluoric, hydroiodic, hydrosulphuric, boric, phosphoric, oxalic, arsenious, arsenic, lactic, acetic, tartaric or citric acids and their metallic or organic salts, and(d)Cynogen compounds.

2. A wet process for the extraction of metal from ore or from any biproduct or residual material is carried on.

3. Electrical energy is used in any process of chemical manufacture.

4. Alkali waste or effluents therefrom is subjected to any chemical process for the recovery of sulphur, or for the utilisation of any constituent of such waste or effluent.

5. Carbon bisulphide is made or hydrogen sulphide is evolved by the decomposition of metallic sulphides or hydrogen sulphide is used in the production of such sulphides.

6. Bleaching powder is manufactured or chlorine gas is made or is used in any process of chemical manufacture.

7. (a) Gas tar or coal-tar or any compound product or residue of such tars is distilled or is used in any process of chemical manufacture.

(b)Synthetic colouring matters or their intermediates are made.

8. Refining of crude shale oil or any process incidental thereto is carried out.

9. Nitric acid is used in the manufacture of nitro compounds.

10. Explosives are made with the use of nitro compounds.

11. Insecticides, which may be phosphorus, nicotine, mercury, naphthalene, cyanogen, arsenic fluorine, copper, benzene and ethane compounds or derivatives and methyl bromide, are manufactured, mixed, blended, and packed.

12. Viscose rayon is manufactured or processes incidental thereto are carried out.

13. Phosgene (carbonyle chloride) is manufactured, stored, handled, processed or used.

14. Aliphatic or aromatic compounds including petroleum and petroleum products and their derivatives or.substituted derivatives are manufactured, processed or recovered.

Appendix II

1. A nitro or amino process (overall suits or working clothes and protective footwear).

2. Grinding raw materials in a chrome process (overall suits).

3. The crystal department and in packing in a chrome process (protective coverings).

4. Packing in a chrome process (respirators).

5. Any room or place in which chlorate is crystallised, ground, parked (clothing of woollen material and boots or over shoes, the soles of which have no metal on them).

6. Any room in which caustic is ground or crushed to machine (goggles and gloves or other suitable protection for the eyes and hands).

7. Bleaching powder chambers, or in packing charges drawn from such chambers (suitable respirators).

8. Drawing off of molten sulphur from sulphur jaots in the process of carbon disulphide manufacture (overalls, face shields, gloves and footwear of fire-proof materials).

9. (i) Manufacture, mixing, blending and packing of insecticides which are phosphorus, nicotine, naphthalene, cynogen, arsenic, fluorine, mercury and copper compounds or derivatives and methyl cromide (rubber aprons chemicals type goggles and suitable respirators, and in addition rubber gloves and boots for phosphorus and nicotine derivatives, synthetic rubber aprons, gloves and boots when working with oil solutions, and washable working clothes laundered daily).

(ii)Manufacture, mixing, blending and packing of insecticides which are derivatives of benzene or ethane (rubber aprons, and suitable respirators, separate work clothes laundered frequently).Appendix III

1. A nitro or amino process.

2. The crystal department and the packing room in a chrome process.

3. The process of distilling gas or coal-tar (other than blast furnace tar) and any process of chemical manufacture in which such tar is used.

4. The manufacture, mixing, blending and packing of insecticides mentioned in Appendix I.

XIV

Compression of Oxygen And Hydrogen

1. The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing of Oxygen and Hydrogen and also from the electric generator room. -

2. The purity of Oxygen and Hydrogen shall be tested by a competent person at hourly intervals at the following points;-

(i)in the electrolyser room,(ii)at the gas-holder in-let, and(iii)at the section end of the compressor.The figures relating to the degree of purity as obtained from the test carried out shall be recorded systematically in a register or a log book maintained only for this purpose and shall be signed by the person carrying out the test:Provided, however, that if the electrolyser plant is fitted with an automatic device for recording the purity of the gases along with visual warning signals, it shall be sufficient if the purity of the gases is tested at hourly intervals at the suction and of the compressor only.

3. The Oxygen and Hydrogen gases shall not be compressed if their purity determined by the that carried out under clause 2 falls below 98 per cent at any time.

4. Effective negative pressure switch shall be provided adjacent to the suction main close to the gas-holder and between the gas-holder and the hydrogen compressor in such manner that the compressor is automatically stopped at a predetermined safe pressure in the gas-holder.

The negative pressure switch provided shall be tested and examined for its effective working once every shift by a competent person and records of all such examinations shall be maintained in a register signed by the Manager of the factory.

5. The bell of any gas-holder shall be permitted to go within 30 cms. (12 inches) of its lowest position when empty and a limit switch shall be provided for this purpose in the gas-holder with adequate alarm indicators both visible and audible to indicate that the gas-holder has reached the limit.

6. The water and caustic soda used for making lye shall be chemically pure within pharmaceutical limit.

7. Electrical connections at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude any possibility of any wrong connection, leading to reversal of polarity, and in addition and automatic device shall be provided to cut off power in the event of reversal of polarity owing to wrong connection either at the switch board or at the electric generator terminal.

8. Oxygen and Hydrogen gas pipes shall be painted with distinct colours so that they may be clearly and easily distinguished and in the event of any leakage at any joint of the Hydrogen gas pipe, the pipe after reconnection shall be completely purged of air before drawing in Hydrogen gas.

9. All electrical apparatus, equipments and appliances including wirings, machines, switch-gears, light points, switches, plugs, sockets, etc., in the electrolyser room shall be of flame proof construction or enclosed in flame-proof fittings and no naked light or flame shall be allowed to be taken in or near the electrolyser room or where compression and filling of any gas is carried on, and warning notices to such effect shall be displayed at prominent places.

10. No part of the electrolyser plant and the gas holder and compressor shall be subjected to welding, brazing, soldering or cutting until all explosive substances have been completely removed from that part so as to render the part safe for such operation and after the completion of such operation no explosive substance shall be allowed to enter that part until the metal has cooled sufficiently to eliminate any risk of explosion

11. (a) All sources of starting an ignition or of producing a spark whether electrical or otherwise shall be eliminated from such parts of the plant or factory where there may be any risk of explosion.

(b)In all such parts of the factory or plant, shoes with nails, belts or synthetic clothes, likely to generate spark due to friction or discharge of static electricity (unstatic electricity to earth continuously) or use of tools likely to produce a spark shall not be allowed, and all such plants, parts or machines whereon static electricity may build up shall be solidly and effectively earthed.

12. No person shall be permitted to enter any place or area where there is risk of explosion, while carrying a match box or a ligher, and arrangement shall be made to collect all such articles outside before the person enters any such place or area.

13. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who by his training and experience possesses the knowledge of the necessary precautions against risk of explosion and is competent to supervise such work. An electric generator

connected to an electrolyser after election or repairs shall not be switched on unless the same is certified by the competent person under whose direct supervision election or repairs are carried on, to be safe, and the terminals have been checked for the polarity as required under clause 7.

14. Every part of an electrolyser plant, gas holder and compressor shall be checked and overhanded at suitable intervals regularly and every defect noticed shall be rectified forthwith.

15. Detailed instructions with regard to the operation of the plant, precautions to be taken, and the steps to be taken in case of an emergency, shall be prepared and displayed at prominent places close to the plant. ^

16. A register or a log book in convenient form shall be maintained in which all operations carried out in such factories and plants shall be regularly recorded and signed by the person incharge of the plant carrying out the operation as well as by the person.

XV

1. Application.-This schedule shall apply to factories in which any of the following processes is carried on:-

(i)Breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;(ii)All processes in the manufacture of asbestos textiles including preparatory and finishing processes;(iii)making of insulation slabs or section, composed wholly or partly of asbestos, and processes incidental thereto;(iv)making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;(v)manufacture of asbestos card-board and paper;(vi)manufacture of asbestos cement products;(vii)application of asbestos by spray method;(viii)sawing, grinding, turning, abrading and polishing, in the dry state of articles composed wholly or partly of asbestos;(ix)cleaning of any room, vessel, chambers, fixture or appliances for the collection or removal of asbestos dust:Provided that if the Chief Inspector is satisfied that in respect of any factory or workshop or part thereof, by reason of the restricted use of asbestos or the method of working, of occasional nature of work, or otherwise, all or any of the provisions of this schedule, can be suspended or relaxed without danger to the health of the persons employed therein, he may by an order in writing grant suspension or relaxation subject to such conditions or for such period as he may think fit. Any such order may be revoked at any time.

2. Definition.-For the purpose of this Schedule:-

(i)"asbestos" means any fibrous silicate mineral, and any admixture containing any such mineral, whether crude, crushed or opened;(ii)"asbestos textiles" means yarn or cloth composed of asbestos or asbestos mixed with any other material;(iii)"preparing" means crushing, disintegrating, and any other process in or incidental to the opening of asbestos;(iv)"approved" means approved for the time being in writing by the Chief Inspector;(v)"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.

3. An exhaust draught effected by mechanical mean which prevents the escape of asbestos dust into the air of any room in which persons work, shall be provided and maintained for-

(a)manufacturing and conveying machinery, namely:-(i)preparing, grinding or dry mixing machines;(ii)carding, card-waste-end ring spinning, machines, and looms;(iii)machines or other plant fed with asbestos;(iv)machines used for the sawing, grinding, turning, abrading or polishing, in the dry state, of articles composed wholly or partly of asbestos.(b)cleaning, and grinding of the cylinders or other part of a carding machine.(c)chambers, hopers or other structures into which loose asbestos is delivered or passes.(d)work benches for asbestos waste sorting or for other manipulation of asbestos by hand.(e)work places at which the filling and emptying of sacks, skips or other portable containers, weighing or other process incidental thereto which is effected by hand, is carried on.(f)sack-cleaning machines.Provided that his clause shall not apply.-(i) to a machine or other plant which does not give rise to asbestos dust or is so enclosed as to prevent escape of asbestos dust into the air of any room in which persons work, or (ii) where the asbestos is so wet or so treated with grease or other materials as to prevent the evaluation of dust, or (iii) to the making or repairing of insulating mattresses, or (iv) to mixing or blending by hand of asbestos.

4.

(1)Mixing or blending by hand of asbestos shall not be carried on except with an exhaust draught effected by mechanical means so designed and maintained as to ensure as far as practicable the suppression of dust during the processes.(2)In premises which are constructed or reconstructed after this schedule comes in to force, the mixing or blending by hand of asbestos shall not be done except in a special room or place in which no other work is ordinarily carried on.(3)(a)The 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.(b)In every room in which the making or repairing of insulating mattresses is carried on:-(i)adequate exhaust and in lost ventilation in accordance with arrangements to be approved in each case shall be provided and maintained;(ii)on person other than those engaged in filling, beating or levelling shall be present whilst such processes are being carried on and work shall not be resumed in the room after filling, beating or levelling for at least ten minutes;(iii)the floors and benches shall be kept damped so as to effectively prevent dust arising therefrom;(iv)The covers shall be effectively damped immediately after being cut out and in the case

of fibre filled mattresses, shall be kept damp whilst filling, beating or levelling is being carried on.(4)(a)Storage chambers or bins for loose asbestos shall in the case of premises constructed or reconstructed after this schedule comes into force, be effectively separated from any work room and in the case of other premises be effectively separated from any work room in which the asbestos is not required for the purposes carried on in the room.(b)Chambers or apparatus for dust setting and filtering shall not be allowed in any work room.(c)Effective arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air any work room.(5)All machinery used in preparing, grinding of asbestos carding, card roller cleaning and grinding, and sack cleaning sand all card waste-end machines latrines, elevaters, chutes, and conveyers shall be so constructed and maintained that dust or debris containing asbestos cannot escape from any part thereof, other than dust removed by air exhaust draught provided in accordance with clause 3 of the Schedule.(6)(a)Cleaning by hand of the cylinders (including the deffer cylinders) of a carding machine, shall not be done whilst any person other than those performing or assisting at the cleaning is present.(b)After six months from the date on which this schedule comes into force such cleaning as aforesaid shall not be done by means of hand strickless or other hand tools:Provided that the Inspector or the Chief Inspector may direct such other measures and precaution to be taken, as may be considered necessary for securing the health of the workers, employed on processes and work specified in clause 4.

5.

(1)In every room in which any of the requirements of this Schedule apply:-(a)The floors, work benches and plant shall be kept in a cleaning state and free from asbestos, debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use, 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)Every room as aforesaid shall be adequately lighted.

6. (a) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with clause 3 and sub-clause (5) of clause 4.

(b)All sacks used as containers for the purpose of transport of asbestos within the factory shall be constructed of impermeable material and shall be kept in good repair.

7. (a) All ventilating plant used for the purpose of extracting or suppressing dust as required by this schedule shall at least once in every six months be thoroughly examined and tested by a competent person and any defect disclosed by such examination and test shall be rectified forthwith.

(b)A register containing particulars of such examination and test and the state of the plant and the repairs or alterations (if any) found to be necessary shall be kept, and shall be available for inspection by an Inspector.

8. A breathing apparatus shall be provided for every employee:-

(a)In chamber containing loose asbestos;(b)In cleaning dust setting or filtering chambers or apparatus;(c)In cleaning the cylinders, including the deffer cylinders, or other part of the carding machine by means of hand-strickless; and(d)in filling, beating or levelling in the manufacture or repair of insulating mattresses.

9. There shall be provided and maintained for the use of all persons employed in the cleaning of dust setting and filtering chambers, tunnels and dusts, suitable overalls and head coverings.

10. No young person shall be employed in or in connection with the manufacture of insulating mattresses, in mixing or blending of asbestos by hand, in sack cleaning, in chambers, or apparatus for dust setting or filtering; in chambers containing loose asbestos, or in stripping or grinding the cylinders including the deffer cylinders or other part of a carding machine.

11. Medical examination.-(a) No worker shall be employed" in any factory on any of the processes specified in clause I, unless he has been medically and radiologically examined and has been declared fit and has been granted a certificate of fitness in Form no. 25.

(b)Every worker employed on any of the aforesaid processes on the date on which the schedule comes into force shall be medically and radiologically examined within three months of the said date.(c)Every worker employed on any of the aforesaid processes shall be medically examined at intervals of six months after the first medical examination conducted under sub-clauses (a) and (b) and radiologically at intervals of 3 years after the first radiological examination conducted under sub clauses (a) and (b).(d)A worker already in employment and declared unfit by the Certifying Surgeon shall not be allowed to work on any of the processes specified in clause I, unless he has been examined again and has been certified to be cured and fit to work on the said process again.(e)A worker declared to be unfit to work on any of the aforesaid processes, may be employed on such other work or process as may be considered safe and as may be advised by the Certifying Surgeon:Provided that if the Certifying Surgeon declares that a worker has been completely incapacitated and he was not fit to be employed on any process, such worker shall not be allowed to continue to work on any work or process.(f)The Certifying Surgeon may direct that a worker may be X-Rayed or he may be subject to further examination by a specialist or to any other examination, clinical, pathological or otherwise or that he should undergo a specified treatment, and it shall be the responsibility of the employer (Occupier and the Manager) to arrange for the specified examination and/or treatment and to bear all expenses thereof or in connection therewith:Provided that in factories in which the Employees State insurance Schemes is in Operation, the Certifying Surgeon shall refer the case of insured workers to the Medical Officer Incharge of the Employees State Insurance Dispensary with his findings and recommendation.(g)The Certifying Surgeon shall

after such examination grant a certificate in Form No. 26.(h)The Manager shall maintain all the certificates in a proper register or file and shall produce all the certificates before an Inspector whenever demanded.(i)The Manager shall maintain the details of every medical examination in Form no. 17 and the register shall be produced before an Inspector whenever demanded.(j)The term "medical examination" whenever used in this clause means "Medical Examination carried out by the Certifying Surgeon."(k)It shall be the responsibility of the Employer (Manager and Occupier) to get the workers medically and radiologically examined and to bear the cost of such examinations.(l)Reports of radiological (X-Ray) examination along with the X-Ray plate shall be produced before the Certifying Surgeon within 15 days of the examination, for his examination, advice and such action as he may consider necessary.

XVI

Manufacture or Manipulation of Manganese and its Compounds.

1. Definitions.-For the purpose 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, grinding, sieving, drying, packing, sweeping or otherwise handling of manganese, or a compound of manganese, or an ore or 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.

2. Application.-This Schedule shall apply to every factor in which or in any part of which any manganese process is carried on.

3. 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 provision 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.

4. Isolation of 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 process and other parts of the factory and person on other work or process may not be affected by the same.

5. 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.

6. Medical examination.-(1) Every person employed in a manganese process shall be medically examined by a Certifying Surgeon within 14 days of his first employment and thereafter at intervals of not more than three months.

(2)If a person on medical examination is found fit for employment on a manganese process, the Certifying Surgeon shall grant a certificate of fitness in Form no. 27 which shall be kept in the custody of the Manager of the factory. The certificate shall be readily produced by the Manager whenever required by any Inspector, and the certified person shall be provided with a token made of metal with the number of the certificate inscribed thereon and the said person shall always carry the said token on his person while at work.(3)If a person is found unfit to work on any manganese process the Certifying Surgeon shall grant a certificate to that effect and such person shall not be allowed to work in any manganese process.(4)If the Certifying Surgeon finds that any worker who had been granted a certificate of fitness at a previous medical examination is no longer fit to be employed on any manganese process he may revoke the previous certificate and no person whose certificate of fitness has been revoked shall be allowed to work on any manganese process.The Certifying Surgeon may require such person to be produced before him for fresh medical examination after such period as he may specify in writing on the revoked certificate and the Health Register.(5)If the Certifying Surgeon is of the opinion that a person had become permanently unfit for employment of any manganese process, he shall make an entry to that effect in the certificate and in the Health Register and no such person shall be allowed to work in any manganese process.(6)If the Certifying Surgeon is of the opinion that a person had become permanently unfit for any work in any factory or any process he shall grant a certificate to that effect.(7)If the Certifying Surgeon is of the opinion that any special expert examination or test is necessary for a proper diagnosis in a doubtful case, he may direct the Manager and/or the occupier, to get the worker examined by such expert, or to get such tests carried out as may be specified by him and the Manager and/or the occupier, as the case may be, shall comply with direction given within the specified time and produce the report of examination or test as the case may be before the Certifying Surgeon.(8)If the Certifying Surgeon is of the opinion that any person is not fit for employment in any manganese process but is fit to be employed on any other work he may advise accordingly and shall grant a certificate to that effect in which case the Manager and/or the occupier may employ the said person of such other job as may be safe for him.(9)If any person has any doubt regarding the

diagnosis of the Certifying Surgeon he may make an appeal to the Chief Inspector of Factories and Chief Inspector may refer the case to the Medical Inspector of Factories or to a Medical Committee constituted by him for this purpose of which the Medical Inspector of Factories shall be a member. The decision of the Medical Inspector or the Committee as the case may be shall be final in the matter.

7. Personal Protective Equipment:-(1) 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 overall and head covering shall be worn by the person while working on a manganese process.

(2)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.(3)The Occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and make adequate arrangement for cleaning and maintenance of personal protective equipment.

8. Prohibition relating to women and young persons.-No woman or a young person shall be employed or permitted to work in any manganese process.

9. Food drinks prohibited in the work rooms.-No food, drink, Pan, Supari or tobacco shall be allowed to be brought into or consumed by any worker in any work room in which any manganese process carried on.

10. 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.

11. 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 wash place under cover, with either-

(1)a trough with a smooth impervious surface fitted with a waste pipe without plug. The trough shall be 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 at least one wash basin for every five such persons employed at any time, fitted with a waste pipe and plug and having a constant supply of water; or(2)sufficient supply

of soap or other suitable cleaning material and nail brushes and clean to wels.

12. 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 arrangement for drying the clothing.

13. Cautionary play card and instructions.-Cautionary notice in the following form and printed in the language of the majority of the workers employed, shall be affixed at 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 measures and methods to protect themselves. The notices shall always be maintained in a legible condition.

Cautionary NoticeManganese and Manganese Compounds(1)Dusts, fumes and mists of Manganese and compounds are toxic, when inhaled or when ingested.(2)Do not consume food or drink near the work place.(3)Take 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 be inhaled, use respiratory protective equipment provided for the purpose.(7)If you get severe headaches, prolonged sleeplessness or any abnormal sensations on the body, report to the Manager who would make arrangements for your examination and treatment.

XVII

Manufacture and Manipulation of Dangerous Pesticides

1. Definitions.-For the purpose of this Schedule the following definitions shall apply:-

(i)'Dangerous pesticides' means any chemical or substance used for controlling, destroying or repelling any pest or for preventing growth thereof or for mitigating effect of such growth including any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made thereunder, and any other substance, which may be notified from time to time by the State Government to be a dangerous pesticide.(ii)'Manipulation' includes mixing, blending, formulating, filling, emptying, packing or otherwise handling.(iii)'Efficient exhaust draught' means localized mechanical ventilation for removal of smoke gas, vapour, dust, fume or mist so as to prevent the same from escaping in the air of any work place where any work is carried on. No arrangement or device shall be deemed efficient if it fails to remove the smoke fume or mist generated at the point where it originates, and which permits the substance removed to escape into or re-enter the same or any other place of work-either directly or indirectly.(iv)'First Employment'

shall mean first employment in any manufacturing process to which this Schedule applied and shall also include re-employment in said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months.(v)'Suspension' means suspension from employment in any process wherein a dangerous pesticides is manipulated by a written certificate in the Health Register in Form No. 16 signed by the Certifying Surgeon who shall be competent to suspend any person employed in such process.

2. Application.-(1) This Schedule shall apply in respect of all factories or any plant of any factory in which the process of manufacture or manipulation of any dangerous pesticide hereinafter referred to as the said "Manufacturing process" is carried on.

(2)These Rules shall be in addition and not in derogation to any other provision of the Act or the Rules or to the provisions of any other Act in force.

3. Instruction of workers.-Every worker on his first employment shall be fully instructed on the properties including dangerous property of the chemical used or handled in the said manufacturing process and the hazards involved. The worker shall also be instructed in the measures to be taken to deal with any emergency. Such instructions shall be repeated periodically.

4. Cautionary Notice and placards.-Cautionary notices and placards in the form specified in Appendix I of this Schedule and printed in the language of the majority of the workers shall be displayed in all work places in which the said manufacturing process is carried on so that they can be easily and conveniently read by the workers.

5. Prohibition relating to employment of women or young persons.-No women 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 any dangerous pesticide is stored.

6. Food, drinks and smoking prohibited.-(1) No food, drink, tobacco, pan or supari shall be brought in or consumed by any worker in any work room in which the said manufacturing process is carried out.

(2)Smoking shall be prohibited in any work room in which the said manufacturing process is carried out.

7. Medical Examination.-(1) Every worker proposed to be employed in the said manufacturing process shall be examined by a Certifying Surgeon before his first employment and shall be employed on the said manufacturing process only, if declared fit for such employment and a certificate to this effect is granted in Form no. 24.

(2)Every worker already employed on the said manufacturing process on the date on which these rules come into force shall be examined by a Certifying Surgeon within one month of the said date and shall be allowed to continue on the said manufacturing processes only, if declared fit for such employment and a certificate to this effect is granted in Form No. 24.(3)Every worker employed in the said manufacturing processes shall be reexamined by a Certifying Surgeon at least once in three calendar months and a record thereof shall be kept in Form No. 25.(4)No worker after suspension shall be employed without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

8. Medical facilities.-A qualified medical practitioner shall be employed in every factory in which the said manufacturing processes is carried on who shall examine every worker employed on the said manufacturing process at least once in every week and when necessary treat for the effects of excessive absorption of the dangerous pesticides.

(2)Effective arrangements shall be made to ensure quick availability of a qualified medical practitioner in emergency.(3)Necessary and adequate medicines and antedotes and other equipments required for treatment of excessive absorption of dangerous pesticides shall be provided and maintained at all times.(4)Record of examination and treatment and tests shall be maintained in Form no. 16 and shall be made available to Inspector for inspection.(5)The Chief Inspector may direct by an order in writing any suitable clinical tests to be carried out at specified intervals in respect of workers employed in any factory in which the said manufacturing process is carried on.

9. Protective clothing and protective equipment.-(1) Protective clothing consisting of long pants and shirts or overalls with long sleeves, and head covering shall be provided for all workers employed in the said manufacturing process.

(2)(a)Protective equipments 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.(b)Gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.(3)Protective clothing and equipment shall be worn by the worker supplied with such clothing and equipment whenever he works on the said manufacturing process.(4)Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed as frequently as necessary, if handling other

pesticides, depending upon the nature thereof.(5)Protective clothing and equipment shall be maintained in good repair.

10. Floors and work benches.-(1) Floors in every work room where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2)Floors shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe.(3)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.-(1) If a dangerous pesticides during its manipulation splashes or spills on the work benches, floor or on the protective clothing worn by a Worker, immediate action shall be taken for thorough decontamination of the work-bench, floor or protective clothing as the case may be.

(2)Cloth, rag, paper or other material soaked or solid with any 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.(3)Suitable deactivating agents, where available, shall be kept in a readily accessible place for use in attending to a spillage.(4)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, destroyed or disposed of.

13. Manual handling.-(1) A dangerous pesticides shall not be required or allowed to be manipulated by hand except by means of a long handled scope.

(2)Direct contact of any part of the body with a dangerous pesticides shall be avoided.

14. Ventilation.-(1) In every work room or area where any dangerous pesticides is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.

(2)Unless the plant and the process is completely enclosed the following operations in connection with the manipulation of a dangerous pesticides shall not be allowed to be carried out or undertaken

without an efficient exhaust draught:-(a)employing a container holding a dangerous pesticides.(b)blending a dangerous pesticides.(c)preparing a liquid or power formulation containing a dangerous pesticides.(d)changing or filling a dangerous pesticides into any container including small size container, tank hopper or machine.(3)In the extent of a failure of the exhaust draught provided the operations mentioned in sub-rule (2) shall be stopped forthwith.

15. Time allowed for washing.-(1) Before each meal and before 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 any dangerous pesticide.

(2)Every worker engaged in the manipulation of dangerous pesticides shall have thorough wash before consuming any food and also at the end of the day's work.

16. Washing and bathing facilities.-(1) There shall be provided and maintained in clean state and in good repair for the use of the workers employed on the said manufacturing process adequate washing and bathing places having a constant supply of water under cover at the rate of one place for every such 5 workers employed at any one time:

Provided that the provisions of sub-rule (4) of rule 63 relating to persons, whose work involves contact with an injurious or noxious substance shall not apply in respect of workers employed on the said manufacturing process:Provided further that for computation of the number of workers, maximum number of workers employed at any one time on any day shall be the basis.(2)The washing places shall have stand pipes placed at interval of not less than one meter.(3)Not less than one-half of the total number of washing place shall be provided with bath-room.(4)Sufficient supply of 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.(5)Sufficient supply of soap and nail brushes shall be provided.

17. Cloak-rooms - There shall be provided and mentioned for the use of the workers employed in the said manufacturing process:-

(1)A cloak-room for clothings put off during working hours with adequate arrangements for drying of the clothings, if wet.(2)Separate cupboards or some other suitable arrangement for the storage of protective clothings provided under paragraph 9.

18. Mess-room.-There shall be provided and maintained for the use of the workers employed in the factory in which the said manufacturing process is carried on a suitable mess-room which shall be furnished with:-

(1)Sufficient tables and benches with back-rest;(2)Adequate number of wash-basins; and(3)Adequate means for warming food.The mess-room shall be placed under the charge of wholetime attendance and shall be kept clean.

19. Exemption.-If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the said manufacturing process or for any other reason which he shall record in writing all or any of the provisions of this schedule are not necessary for the protection of the workers employed in the factory, he may by an order in writing, exempt, such factory, from all or any of the provisions of this schedule on such condition as he may specify therein, such order may at any time be revoked by the Chief Inspector after recording his reasons therefor.

20. Manipulation not to be undertaken.-Manufacture or manipulation of a pesticide shall not be started in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.

Appendix ICautionary NoticeInsecticides and Pesticides

1. Chemicals handled in this plant are poisonous.

2. Smoking, taking food or drink, chewing tobacco in this area is prohibited No food 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 every meal.

5. A good bath shall be taken at the end of the shifts.

6. Protective clothing and equipment supplied shall be used while working in this area.

7. Containers of pesticides shall not be used for keeping any food stuff or drink.

8. Spillage of any chemical on any part of the body or on the floor or work bench shall be immediately washed away with water.

9. Clothing contained 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 any sickness like nausea, vomiting, giddiness, the superior officer, the manager, the Plant Medical Officer if there is any, should be informed who will make necessary arrangements for treatment.

13. All workers shall report for the prescribed medical examination and test regularly and when required to protect their own health.

XVIII

Process Involving Manufacture, Use, Storing, Handling or Manipulating of Benzene or any Substance Containing Benzene

1. Application.-This schedule shall apply in respect of all factories or to any part of any factory in which benzene is manufactured, stored, handled, or otherwise used or manipulated.

2. This schedule shall be without any prejudice to and in addition to and not in derogation to any provision of the Act or other rule or of any provision of any other Act, rule or regulation.

3. Definitions.-For the purpose of this Schedule:-

(a)"Benzene" means an aromatic hydrocarbon C6H6 and benzene or all substances containing benzene shall be treated as "benzene" for the purposes of this Schedule.(b)"Effective substitute" means a chemical or any other substance which can be used as a substitute to benzene and which is not toxic or the toxicity of which is so low as not to be dangerous and unsafe for the health of any human being.(c)"Enclosed apparatus" means an apparatus or system fully enclosed such that it will not allow any escape of benzene vapour or fume from the apparatus into the atmosphere at any state.(d)"Efficient exhaust draught' means localised ventilation effected by mechanical or other means for the removal of vapour or fumes so as to prevent the vapour or fume from escaping into

the air of any place in which work is carried on. No arrangement or device shall be deemed to be efficient which fails to remove effectively vapour or fume generated at the point where it originates, and which permits the said vapour or fume removed to escape into or re-enter the same or any other work place either directly or indirectly.(e)"Air-line respirator" means an apparatus for supply of air of required purity at required temperature and pressure in properly laid out pipe line with facilities to draw the breathing air from those pipe lines through a hose line to the face mask for the purposes of breathing fresh and pure air.(i)Air-line respirator shall comprise containing breathable air with facilities for necessary nose connection and shall have suitable breathing mask provided so that a person working in poisonous or irritable atmosphere is able to breath pure and fresh air from the pipe line during the period of work, without any harm or injury to health or discomfort to him.(ii)Air-line respirator shall also include any other suitable apparatus for the purpose of breathing pure and fresh air approved in writing by the Chief Inspector.

4. Cautionary Placards.-Cautionary notice in the form specified in appendix A attached to this schedule and in the language of the majority of workers employed shall be displayed at prominent places in the area, where there may be likelihood of presence or escape of benzene, either accidentally or under normal condition.

5. Substitution-[(a) Use of Benzene and substances containing benzene is prohibited in the following processes:-

(i)manufacture of varnishes, paints and thinners, and(ii)cleaning and degreasing operations.](b)Wherever any effective substitute is available benzene shall not be used.(c)The Chief Inspector, by an order in writing, may allow the use of benzene, if he is satisfied in respect of any factory or any process that owing to the special condition or special method or work or for any other reason it is not necessary to substitute benzene, subject to such conditions as he may specify. He may in his discretion at any time revoke the whole or part of such order.

6. Prohibition relating to employment of women and young persons.-No women or young persons shall be employed or permitted to work in any room or place in which benzene is used.

7. Improper use of benzene.-(a) Workers shall be prohibited to use benzene for any purpose other than the process for which the benzene is supplied or provided.

(b)Workers shall be instructed regarding the possible dangers arising from such misuse and a cautionary notice in respect thereof shall be displayed.

8. Instructions as regards risks.-Every worker in his first employment shall be fully introduced on the properties of benzene which he may have to handle, of the dangers involved and the precautions that would be taken. Workers shall also be instructed on the measures to be taken to deal with any emergency:

Provided further that such instructions shall be imparted by duly qualified medical or industrial hygiene officer or by duly qualified safety officer or in smaller factories where such officers are not available, by a duly qualified person and a record thereof shall be maintained in a register which shall be signed by the instructor as well as the manager and which shall be produced for inspection on demand.

9. Prohibition on consuming food etc., in work places.-No worker shall store or consume food, drink, tobacco, pan or any similar article on or near any part of the work place where benzene is manufactured, handled, stored or used.

10. Enclosure of process.-(a) All processes involving use of benzene shall be carried out in enclosed apparatus or plant.

(b)The Chief Inspector, if he is satisfied in respect of any factory or any process that owing to special conditions or special method or work or any other reason the work or process involving the use of benzene may be carried out in an apparatus which is not fully enclosed he may by an order in writing permit such a process to be carried out otherwise subject to such conditions as he may in his order specify.He may in his discretion at any time revoke whole or part of such order.

11. Efficient exhaust draught.-Where a process using benzene cannot be carried out in an apparatus or plant totally enclosed, the Inspector may permit the factory to carry out such process under efficient exhaust draught with such condition that he may specify.

12. Floor of work room.-The floor of every work room in which benzene is manufactured, used, stored, or handled shall be:-

(a)made of such material which may not absorb benzene;(b)Smooth and impervious to water;(c)maintained in sound condition;(d)with adequate slope and provided with efficient drains; and(e)thoroughly washed daily by means of hose pipe and the drain water shall be led into a sewer through a closed channel.

13. Collection of waste.-(a) A suitable receptacle made of metal with a tightly filing cover, shall be provided and used in each work room by depositing wastes, like cloth, paper or other material soiled with benzene.

(b)All such contaminated waste material shall be destroyed by burning at a safe place either when the receptacle is full or once in a day whichever is earlier.

14. Empty containers.-Empty containers used for holding benzene shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or disposed of.

15. Decontamination of pit, tank etc.-(a) No part of any plant which has contained benzene shall be repaired or opened for repaid unless it has been emptied of benzene, thoroughly cleaned and decontaminated and properly tested that it does not contain any trace of benzene.

(b)Before a worker enters a tank, pit, kettle or any other confined space which has contained benzene it shall be thoroughly washed and decontaminated and tested and certified by competent person that the tank, pit, kettle, or the confined space, as the case may be, is free of benzene and safe for any person to enter.(c)Record of such test shall be maintained in a register which shall be signed by the competent person and the register shall be made available for inspection whenever required by an Inspector provided that the Chief Inspector may direct that the said register shall be maintained in a form specified by him.

16. Proper labelling.-Every container containing benzene shall have a proper label which shall include the following information:-

(a)Benzene-Poisonous.(b)Benzene content-Percentage.(c)Warning about the toxicity.(d)Warning about inflammability.(e)Appropriate symbols.

17. Washing facilities.-(a) At the place wherein benzene is manufactured or used, stored or handled there shall be provided and maintained in clean state and in good repair washing facilities as specified below for the use of all persons employed in the process:-

(i)An enclosed washing place under cover, with soap and towel and with at least one tap for every 10 persons working at any one time at the place and having a constant supply of water,(ii)The washing facilities shall be located in a place easily accessible to workers,(iii)A clean towel shall be provided individually to each worker if so directed by the Inspector.(b)All workers employed in any process in which benzene is used, before taking food or leaving the factory shall have a thorough wash.Proper and adequate supervision shall be maintained over the workers so that they have thorough wash

before meals and before leaving the factory at the end of the day's work. An Inspector may by an order in writing direct that sufficient quantity of hot water for washing during winter season shall be provided.

18. Appropriate work clothes.-Every worker exposed to benzene shall be provided with suitable work clothes:

Provided that the Inspector may specify the type of work clothes to be provided to the workers exposed to benzene.

19. Cloak-room.-There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in processes in which benzene is manufactured, used, handled or manipulated-

(a)a cloak room with a locker for each worker having two compartments one for street clothes and the other for work clothes, and(b)a place separate from the labour room and from the mess room for the storage of protective equipments:The accommodation so provided shall be under the care of responsible person:Provided that the Inspector may direct the factory in writing to provide suitable drying or other facilities in the cloak room.

20. Lunch room.-There shall be provided and maintained for the use of the workers employed in the factory and remaining on the premises during the rest or lunch intervals, a lunch room which shall be properly ventilated and furnished with tables and benches and means for warming food. The lunch room shall be placed under the charge of a responsible person and shall be kept clean and well maintained at all times.

21. Non-sparking tools.-No tool which is likely to produce any spark due to impact or friction shall be allowed to be used and only non-sparking tools shall be used in any areas where benzene vapour is likely to be present whether normally or accidentally.

22. Safe limits for benzene.-(1) The concentration of benzene shall not be allowed to exceed 25 parts of vapour or gas per million parts of air by volume or 60 miligram per cubic meter of air, in any part of the factory:

Provided that the Chief Inspector by an order in writing may change this limit at any time as and where he considers the same necessary.(2)Concentration of benzene in the work environment shall be determined at least once a day by adopting suitable tests. The result of such tests shall be entered in a register approved by the Chief Inspector and shall be produced whenever required by the Inspector.Immediate steps shall be taken to reduce the concentration if found in excess of the

specified safe limit. Where for special reasons workers may be exposed for short periods to concentration which exceeds the maximum limit referred to in sub-clause (1), they shall be provided with adequate means of personal protection against the risk of inhaling benzene vapour or of absorbing benzene through the skin.

23. Protective wear and equipment.-(a) Sufficient quantity of the following protective wear and equipment of appropriate and good quality shall be provided for the use of workers employed on any process of manufacture, storing, using, handling or manipulating benzene and they shall be properly maintained so as to be always in a condition to be used:-

(1)Gloves, (2) Aprons, (3) Boots, (4) Goggles, (5) Respirators, and (6) Self-contained breathing apparatus.(b)The above equipment shall be inspected regularly and maintained in proper conditions:Provided that the Inspector may direct that such additional protective wear as he may specify in writing shall be provided for the use of any particular category of workers:Provided further that in case there is any controversy or dispute regarding supply of any protective wear or equipment the matter shall be referred to the Chief Inspector whose decision would be final.

24. Medical facilities.-(a) With the prior approval of the Chief Inspector a qualified medical practitioner shall be appointed in every factory in which benzene is manufactured, used, stored, handled or manipulated to be here-in-after called the Plant Medical Officer:

Provided that-(1)This rule shall not apply to a factory to which sub-rules (1) and (2) of rule 65 are applicable; and(2)in a small factory or in a factory in which workers employed on processes of manufacturing, storing, using, handling or manipulating of benzene the Chief Inspector may permit the employment of a part-time Plant Medical Officer or may permit the Certifying Surgeon to perform the duties of the Plant Medical Officer, subject to such conditions as he 'may specify.(b)Every worker exposed to benzene shall be medically examined and necessary tests to determine the condition of his health shall be carried out by the Plant Medical Officer once in every three months:Provided that if such a worker suffers from cough or breathlessness, his condition of health shall be immediately examined by the Plant Medical Officer and necessary steps will be taken for his treatment.(c)The result of such examination and test shall be entered in a suitable register which shall be produced before the Inspector, whenever required.(d)Adequate supply of suitable antidotes shall be maintained for treatment of acute case of poisoning.(e)For the purpose-of medical examination which the Plant Medical Officer may conduct at the factory premises shall be provided for his exclusive use along with one adequately ventilated, lighted and furnished room with a screen and instruments for such examination.

25. Medical Examination.-(a) Every worker employed in any process of manufacturing, using, storing, handling, or manipulating benzene shall be thoroughly examined by the Certifying Surgeon within seven days following the date of his first employment in any of the said processes and thereafter shall be thoroughly examined by the Certifying Surgeon once in a year or at such shorter intervals as may be specified in writing by the Chief Inspector. The examination shall also include X-Ray of lungs and a blood test. 'First Employment' includes re-employment in the said process following cessation of employment in such process for a period exceeding three months.

(b)A health register in Form no. 16 containing the names of all workers employed in the said processes shall be maintained.(c)If the plant physician after examination, at any time, as per clauses 23 (a), (b) and (c) is of opinion that a person has developed signs and symptoms of benzene exposure he shall make a record of his findings in the said register and inform the manager in writing regarding the same.(d)A worker so found exposed, shall be sent to the Certifying Surgeon with a report of the Plant Physician. The Certifying Surgeon after satisfying himself with the findings of the Plant Physician and conducting further examination if he considers the same necessary, may issue an order for temporary suspension of the person from work in the said process or may advice the worker to be employed on some other work which may be safe for him, or may declare him to be permanently unfit as the case may be.(e)The medical examination of workers shall be arranged by the occupier and manager and the person so examined shall not bear any expense for it.

26. Isolation of building and site and fire resistance.-(a) Building and plant shall be sited with due regards to the dangers which may arise from the processes involved and in particular shall be spaced at distances which are deemed safe for the fire and explosion risk. Consideration shall be given to the effect of any process carried out in adjacent factories or plants.

(b)Where special dangers exist, separate building shall be used for the different parts of a process. They shall be spaced at sufficient distances apart and shielded to prevent damage to each other in the event of fire or explosion, and shall be safe guarded by the provision of suitable blow-out panels for roofs. Where the risk of fire or explosion is considerable, the buildings shall be divided by blast or protective screen walls.(c)No combustible material shall be used in the erection of working buildings, unless there are special reasons necessitating their use, in which case they shall be used only after being rendered fire-resistant. The roof shall be of light fire resistant construction and floors impervious fire-resistant materials and shall be regularly maintained in such condition.

27. Dangers of ignition including lighting installation.-(a) No internal combustion engine, and no electric motor or other electric equipment capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone electric conductor shall be encased in screwed steel conduct.

(b)All hot exhaust pipes shall be installed outside a building and other hot pipe inside the plant be suitably protected.(c)Portable electric lamps shall not be used, unless of an intrinsically safe type and portable electric tools connected by flexible wires shall not be used unless of the flame proof type.(d)Where an inflammable atmosphere may occur, the soles of foot-wear worn by workers shall have no metal on them, and the wheels of trucks, or conveyors shall be of a material which shall be a good conductor and non-sparking. Adequate precautions shall be taken to prevent ignition by sparks emitted from locomotives or other vehicles operated in the factory or on public lines.(e)No electric arc lamp, or naked light, fixed or portable shall be used, and no person shall have in his possession any match or any apparatus of any kind for producing a naked light or spark in, or on or about any part of the factory, where there is any likelihood of fire or explosion from inflammable vapour or fume, and all incandescent electric lights in such parts shall be in double air tight glass covers.(f)Prominent notice in the language understood by the majority of the workers and legible by day and night prohibiting smoking, the use of naked lights, and the 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 any risk of fire or explosion from inflammable vapour or fume. In the case of illiterate workers, the contents of the notices shall be fully and carefully explained to them when they commence work in the factory for the first time and again when they have completed one week at the factory.(g)A sufficient supply of spades, scrappers and pails made from non-sparking materials shall be provided for the use of persons employed in cleaning out or removing residues from any chamber, still, tank or any other vessel wherein there may be risk of ignition or explosion, and in no case any tool other than non-sparking tool shall be used on any such work or, while undertaking any repair or maintenance work at any such place or plant.

28. Static electricity and lightening protection.-(a) All pipe lines and belts and other machinery and plants on which static electricity is likely to accumulate shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to the earthed supply tanks to prevent sparking of static electricity, where necessary humidity shall be controlled.

(b)Mobile tank 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 place.(c)Lightening protection apparatus shall be fitted where necessary, and shall be maintained in good condition.

29. Process heating.-The method of providing heat for a process shall be safe as possible, the heating medium shall be automatically controlled at a pre-determined temperature below the danger temperature.

30. Escape of materials.-(a) Provision shall be made in all plants sewers, drains, flues, ducts, culverts and buried pipes to prevent the escape and spread of any liquid, vapour or fume likely to give rise to fire or explosion, during normal working, cleaning or overhauling or in the event of accident or emergency.

(b)If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluent shall be trapped and rendered safe outside the danger area.

31. Leakage of inflammable or dangerous liquids.-Provision shall be made to confine by means of bund, wails, sumps, etc., possible leakages from vessels containing inflammable or dangerous liquids.

Adequate and suitable fixed fire fighting appliances shall be installed in the vicinity of such vessels.

32. Cleaning of empty containers.-(a) All empty containers which have held inflammable or poisonous material shall be rendered permanently and completely safe and shall not be repaired or destroyed, until their cleaning in such manner as to make them completely and permanently safe has been completed.

(b)Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition.(c)Rubbish shall be removed from buildings without delay and placed in special metal containers provided with close fitting lids. The contents shall be removed daily and suitably dealt with. Waste products containing inflammable or explosive materials shall not be placed on rubbish heaps but shall be destroyed in an appropriate manner.

33. Installing of pipe lines for inflammable liquids.-All pipe lines for the transport of inflammable liquids shall be protected against damage or breakage, shall be arranged so that there is no risk or mechanical damage from vehicles and shall be so laid that, they drain throughout without the collection of deposits at any part. All flanged joints, bends and other connections shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein. The open and closed positions of all cocks and valves shall be clearly indicated on the

outside.

34. Packing of reaction vessels.-Packing and joining materials for reaction vessels (including-covers, man-hole covers and ventilation pipes) and in pipe lines and high or low temperature insulating materials shall not contain materials which are combustible or which react with the products of the plant.

35. Safety valves.-Every still and every closed vessel in which vapour is evolved, and in which the pressure is likely to rise to a dangerous degree, shall have attached to it a pressure gauge and a proper safety valve or other equally efficient means to relieve the pressure maintained in good condition.

36. Vigorous or delayed reaction.-Suitable provisions, such as, automatic and distant control shall be made for controlling the effect of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be provided for in the event of an accident.

37. Examination, testing and repair of plant.-Examination, testing and repair of plant parts which have been in contact with explosives and inflammable material or which is under pressure shall be carried out only by proper supervisions.

38. Alarm system.-(a) Gravity of pressure, feed system of supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems, automatic cut-offs or other devices to prevent overcharging or otherwise endangering the plant.

(b)The amount of inflammable material taken into a building in bulk containers shall be kept as low as practicable at any one time.(c)Adequate steps shall be taken to prevent the escape of inflammable and explosive vapour from any container into the atmosphere of any building.Appendix ACautionary Notice(Clause 4)(1)Benzene and substances containing benzene are poisonous and inflammable substance.(2)Handle, use and process such substances with care. In case of spils and splashes remove contaminated clothing at once and take a wash.(3)Wear protective equipment provided and keep yourself safe.(4)For better safety from these chemicals, maintain good personal cleanliness.(5)In case of symptoms like nausea, vomiting, giddiness, nervous depression during work, report immediately to the Factory Manager who would arrange for treatment.(6)Keep your work place clean.(7)Benzene can be absorbed through skin, hence avoid direct contact.(8)Avoid inhalation of the toxic vapours.(9)Smoking and taking food, drink, chewing tobacco are prohibited in this area.(10)Report for clinical tests to protect your health.[Schedule XIX] [Inserted by S.O. 637

dated 15.4.1982 and re-numbered by S.O. 347 dated 13.3.1986.]Solvent Extraction Plants

1. Definition.-(a) "Solvent Extraction Plant" means any plant in which the process of extracting of oil or any other substance from oil-cake, rice bran or any other articles or substances by the use of any solvent is carried on and the word 'Plant wheresoever used in these rules, unless otherwise specified shall be deemed to mean solvent extraction plant.

(b)"Solvent" means an inflammable liquid having flash point below 120 degree F.(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, the pressure of any internal explosion of any inflammable gas or vapour which may enter or which may originate inside the enclosure without suffering any damage and without any allowing internal inflammable or product of explosion to the external atmosphere.(d)"Competent Person" means a person having a degree or equivalent diploma in Mechanical or Chemical Engineering or in Chemistry with at least 5 years experience in a chemical plant or any other person who by virtue of his other qualification and experience is considered by the Chief Inspector to be a competent person for this purpose;Provided that no person would be deemed to be a competent person who has not obtained a certificate of competency from the Chief Inspector.

2. Location and Lay-out.-(a) No solvent extraction plant shall be permitted to be constructed or extended to within a distance of 30 metres from the nearest residential or office building.

(b)An adequate and continuous wire fencing at a height of at least 15 metres from the ground shall be provided around the solvent extraction plant at a minimum distance of 15 metres from any point of the buildings of the plant.(c)No person shall be allowed to carry any match, cigarette lighter or any other similar device or any device whereby flame or fire can be generated. Any open flame or fire inside the area bound by the fencing.(d)Boiler houses and other buildings where any process involving open flame or fire is carried on shall be located at least 30 metres away from the plant.(e)If any godown or any preparatory process is at a distance of less than 30 metres from the plant, the same shall be at a distance of not less than 15 metres from the plant, and a continuous barrier wall of non-combustible material, at least 1.5 metres high shall be erected at a distance of not less than 15 metres from the plant.

3. Electrical Installations.-(a) An electrical motors, wirings, fittings, switches, switch gears and other electrical apparatus, installed or housed in or close to any solvent extraction plant, shall be of flame proof constructions, approved and certified by the Central Research Mining Station, Dhanbad, or by any other competent authority approved in writing by the Chief Inspector.

Note.-These rules shall be in addition to Schedule VIII-Chemical Works-rule 95 of the Bihar Factories Rules, 1950 or any other relevant provision of the Factories Act, 1948 and the said rules shall be not in derogation of any of them.(b)All metal parts of the plant and buildings, including pipes, tanks and containers where solvent is stored or is present and all parts of electrical equipment not required to be energised shall be properly bounded together and connected to effectively earthed as to avoid accidental rise in the electrical potential of such parts above the earths potential and the earth connection shall at all times be maintained in an effective condition.

4. Restriction on Smoking.-Smoking shall be strictly prohibited within 15 metres distance from the plant. For this purpose "No Smoking" signs shall be boldly and permanently displayed and maintained in the area in such manner that it is clearly visible by day and by night.

5. Precautions against friction.-(a) All tools and equipments including ladders, chains and other lifting tackle required to be used in a solvent extraction plant shall be of non-sparking type.

(b)No machinery or equipment in solvent extraction plant shall be belt driven.(c)No person shall be allowed to enter and work in the solvent extraction plant if wearing clothes made of Nylon or such other synthetic fibre that can generate static electrical charge, or wearing foot-wear which is likely to cause sparks by friction:Devices shall be provided wherever necessary in every room of the plant for effectively discharging of body static electricity likely to be generated for wearing apparel and equipment.

6. Fire-Fighting Apparatus.-(a) Adequate number of portable fire extinguishers suitable for use against flammable liquid fire shall be provided in the solvent extraction plant.

(b)An automatic water spray sprinkler system or a wetpipe or open head deluge system with sufficient supply of water shall be provided throughout the solvent extraction plant and throughout the building housing such plant.

7. Precautions against Power Failure.-Provision shall be made for the automatic cutting off of steam in the event of power failure and also for emergency overhead water supply for feeding water by gravity to condensers which shall come into play automatically with the power failure.

8. Magnetic separators.-Raw materials for use in a Solvent Extraction Plant shall be fed to the extractor by a conveyer through a hopper, and an efficient magnetic separator shall be provided to remove any place of iron from the raw materials and interlocking device shall be provided which, shall stop

feeding of raw materials if magnetic separator is not working.

9. Venting.-(a) Tanks containing solvent shall be provided with emergency vent 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 or substances vented out may not under any circumstance so re-enter the building in which solvent extraction plant is located or in any other building.

10. Ventilation.-The building or shed housing the solvent extraction plant shall be well ventilated and if required the building shall be provided with mechanical ventilation with provision for at least six air changes per hour.

11. Waste water.-Process waste water shall be passed through flash evaporate to remove last traces of solvent before it is discharged into a sump.

12. (a) Solvent shall not be stored in an area covered by solvent extraction plant except in small quantities which shall be stored in labelled safety cans approved by the Inspector.

(b)Waste materials such as oily rags, other wastes and absorbants used to wipe of solvent and paints and oils shall be deposited in containers approved by the Inspector 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 spill of oil or solvent shall be cleaned up immediately.

13. Examination and Repairs.-(a) The solvent extraction plant shall be examined by a competent person to determine any weakness or corrosion or wear, once in every 12 months. Report of such examination shall, be sent 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 the competent person.(c)Suitable facility shall be provided for [purging] [Substituted by S.O. 686 dated 13.7.1988.] the plant with inert gas [on steam] [Inserted by S.O. 686 dated 13.7.1988.] before opening for cleaning or repairs and before introducing solvent after repairs.

14. Operating personnel.-The operation of the plant and machinery in the solvent extraction plant shall be in the charge or such only 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.

15. Employment for women and young persons.-No women or young person shall be employed in any solvent extraction plant.

16. Vapour Detention.-(a) A suitable type of 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.

(b)When any solvent is removed from any batch extractor by vacuum, gauges shall be provided and tests shall be carried out to ensure that a minimum vacuum of 620 mm. (26"-0) mercury is obtained and maintained steadily for a minimum period of 30 minutes before the extractor is allowed to be opened for discharge of coke or for persons to enter or for any other purpose.

17. (a) When on opening the door of a batch extractor the extracted meal cannot be dislodged from the extractor freely, the door shall be closed and the material reheated adequately before the door is reopened;

Provided that if even after adequate reheating, tools must be used for the removal of the extracted meal only non-sparking tools shall be used.(b)Where solvent is removed by steam heating the presence of the solvent shall be tested at the vent provided on the top of the vessel before opening the vessel.(c)A log book of operations giving the following details and informations shall be maintained and made available on demand to the Inspector:-(i)Vacuum gauge reading for each charge.(ii)Testing of continuity of electrical bonding and earning system.(iii)Loss of solvent every 24 hours or loss per tonne of materials used:Provided further that the Chief Inspector may require such further information to be maintained in the log-book as he may consider necessary.

18. (a) An emergency action plans shall be prepared and all personnel shall be properly trained. Training should be followed by periodic emergency action drills.

(b)Emergency instructions shall be boldly displayed at suitable places in the language understood by the majority of workers.

19. (a) All persons employed in the plant shall be made fully aware of the toxic properties of the solvent being used, stored and handled.

(b)All persons exposed to any toxic solvent shall be medically examined by the Certifying Surgeon once in six months and at more frequent intervals by the Medical Officer of the factory:Provided that the Chief Inspector may reduce the period of six months in case he considers that more frequent examination of the health of the workers is necessary to secure their health and safety.][Schedule XX] [Inserted by S.O. 686 dated 13.7.1988.]Operations Involving High noise Levels

1. Application-This schedule shall apply to all operations in any manufacturing process having high noise level.

2. Definitions.-(a) For the purpose of the schedule-

(a)"Noise" means any unwanted sound.(b)"High noise level" means any noise level measured on the a-weighted Scale is 90 db or above.

1	[105] [In Hindi version of Bihar Gazette these figures are 106 and 2/4 respectively.]
[¾] [In Hindi version of Bihar Gazette these figures are 106 and 2/4 respectively.]	107
½	110
¼	115

Notes.-(1) No exposures in excess of 115 dBA is to be permitted.(2)For any period of exposure falling in between any figures and the next higher or lower figure as indicated in column 1, the permissible noise level is to be determined by extrapolation on a proportionate basis.Table 2Permissible Exposure Level of Impulsive or Impact Noise.

Peak noise level in dB.	Permitted number of impulses or impacts per day.
140	100
135	315
130	1,000
125	3,160
120	10,000

Notes.-(1) No exposure in excess of 140 dB peak noise level is permitted.(2)For any peak noise 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 maxima at intervals of one second or less, the noise is to be considered as continuous one and the criteria given in Table 1 would apply. In other cases, the noise is to be considered as impulsive or impact and the criteria given in Table 2 would apply.(c)When the daily noise exposure is composed

of two or more periods of noise exposure at different levels their combined effect should be considered rather than the individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fraction exceed unity:Where the C1, C2 etc. indicate the total time of actual exposure at a specified noise level and T1, T2 etc. denote the time of exposure permissible at that level. Noise exposure of levels less than 90 dBA may be ignored in the above calculation.(d)Where it is not possible to reduce the noise exposure to the levels specified in sub-rule 3 (a) by reasonable practicable engineering control or administrative measures, the noise exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be further provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in sub-rule 3 (a).(e)Where the ear protectors provided in accordance with sub-rule 3(d) and worn by a worker cannot still attenuate the noise reaching near his ear as determined by subtracting the attention value in dBA of the ear protectors concerned from the measured noise level, to a level permissible under 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 time specified in sub-rule 3 (a).(f)(i)In all cases where the prevailing noise levels exceed the permissible levels specified in sub-rule 3(a) there shall be administered ineffective 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 maximum permissible exposure levels specified in sub-rule 3 (a) shall be subjected to an auditory examination by a Certifying Surgeon within 14 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, 1,000, 2,000 4,000 and 8,000 cycles per second:Provided that the Certifying Surgeon may require examination of such workers by an ear specialist and report of all such examinations shall be made available to the Certifying Surgeon:Provided further that all costs of examination by ear specialists shall be borne by the occupier of the factory and the persons being examined shall not bear any expenditure.]

96. Notification of accidents.

(1)When any accident specified in the Schedule takes place in a factory; the manager of the factory, shall forthwith send notice thereof by telephone, special messenger or telegram to the Inspector and if the accident is fatal or of such a serious nature that it is likely to prove fatal notice as aforesaid shall also be sent to-(a)the District Magistrate or Subdivisional Officer,(b)the Officer-in-charge of the nearest police station, and(c)the nearest relative of the injured or deceased person.(2)The notice so given shall be confirmed by the manager of the factory to the abovementioned authorities within 12 hours of the occurrence by sending to them a written report into the prescribed Form no. 17-A:Provided that the Inspector, subject to the approval of the Chief Inspector may permit any factory or any class of factories installed for purposes connected with the Defence of India, to submit the notice of accident in any other form if he is satisfied that the said form furnished all the informations as required by Form 17-A.(3)In case of every accident which is not fatal and in which

any person is injured a supplementary notice in Form no. 17-B shall be sent to the Inspector and the Chief Inspector respectively within 7 days of the date on which the injured worker returns to work.

Schedule 35

1. Accidents which cause-

(a)death to any person.(b)such bodily injury as prevents or will probably prevent the person injured from working for a period of 48 hours immediately following the accident.(c)such injury as may not prevent the injured person from working immediately after the accident, but as may develop subsequently in to an injury due to any infection or due to any other reason which may prevent the injured person from working for not less than 48 hours during any period after the accident.

2. The following classes of accidents, whether or not they are attended by personal injury of disablement-

(a)Bursting of a plant (including any part or accessory thereof) for containing or supplying steam under pressure greater than atmospheric pressure.(b)Collapse or failure of a crane, derrick, winch, hoist or other appliances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane.(c)Explosion or fire causing or liable to cause damage to any building or property or liable to cause any personal injury.(d)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.(e)Collapse or subsidence of any floor, gallery, roof, bridge, tunnel chimney, wall or building forming part of a factory or within the compound or curtilage of factory.(f)Bursting of fly-wheels, wheels of grinding machinery, or any other part of a revolving machinery, or plant.

97. Notice of poisoning or disease.

- As soon as any worker in any factory contacts any disease specified in the Schedule appended to the Act, the manager of the factory shall send a notice thereof in Form no. 18 to the following authorities.(1)Chief Inspector,(2)Inspector,(3)Medical Inspector,(4)Certifying Surgeon.

Chapter X
Supplemental

98. Procedure in appeals.

(1)An appeal presented under section 107 shall lie to the Chief Inspector, or in cases where the order appealed against is an order passed by that officer, to the State Government or to such authority as the State Government may appoint in this behalf and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing court fees stamp in accordance with Article 11 of Schedule II to the Court Fees Act, 1870, and shall be accompanied by a copy of the order appealed against.(2)Appointment of assessors.-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 body declared under sub-rule (3) to be representatives of the industry concerned, to appoint an assessor within a period of 14 days. If an assessor is nominated by such body, 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 Inspectors 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.(3)The appellant shall state in the memorandum presented under sub-rule (1) whether he is a member of one or more of the following bodies-(1)The Bihar Chamber of Commerce.(2)The Bihar Sugar Mills Association.(3)The Bihar Industries Association.(4)The Engineering Association of India.The body empowered to appoint the assessor shall-(a)if the appellant is a member of one of such bodies, be that body;(b)if he is a member of two such bodies, be the body which the appellant desires should appoint such assessor; and(c)if the appellant is not a member of the aforesaid bodies, or if he does not state in the memorandum which of such bodies he desires should appoint the assessor, be the body which the appellate body considers as the best fitted to represent the industry concerned.(4)Remuneration of assessors.-An assessor appointed in accordance with the provisions of sub-rules (2) and (3) shall receive for the hearing of the appeal, also to be fixed by the State Government, subject to 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 assessor 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 State Government may direct that the fees and travelling expenses of the assessor shall be paid in whole or in part by the appellant.

99. Display of notices.

- The abstract of the Act and of the Rules required to be displayed in every factory shall be in Form no. 19.

100.

(1)Annual Returns.- The manager of every factory shall furnish to the Chief Inspector not latter than the 15th January of the year subsequent to that to which it relates, a return in Form 20; provided that-(i)The information regarding canteen shall be furnished only by the manager of every factory notified by the State Government wherein more than 250 workers are ordinarily employed,(ii)The informations regarding creche shall be furnished only by the manager of every factory wherein more than 50 women workers are ordinarily employed, and(iii)The informations regarding shelters, rest-rooms shall be furnished by the manager of every factory wherein more than 150 workers are ordinarily employed.(2)Half Yearly Return.-The manager of every factory shall furnish to the Chief Inspector on or before the 15th July of each year a half yearly return in Form 21.(3)Annual Return of Holidays.-The manager of every factory shall before the end of each year furnish a return giving notice of all the days on which it is intended to close the factory during the next year. This return shall be submitted whether the factory is or is not working during the year preceding the year to which it relates:Provided that the State Government may dispense with this return in the case of any specified factory or of any class of factories or of the factories in any particular area:Provided further

that instead of specifying the actual dates or days of holidays only the system of grant of holidays may be mentioned in the return in case of the factories in which-(a)Sundays are observed as weekly holiday regularly,(b)A fixed day in the week is observed as a holiday regularly, or(c)Holidays are observed according to a list approved by the Chief Inspector:Provided further that where the manager of any factory makes any departure from such a holidays or a list of holidays as aforesaid, prior intimation shall be given to the Inspector.

100A.

The occupier or manager of every factory shall report to the State Government and to the Inspector any intended closure of the factory or any section or department thereof immediately it is decided to do so or any abrupt closure of the factory or any section or department thereof immediately it takes place intimating the reason for the closure, the number of workers on the register on the date of the report, the number of workers affected by the closure and the probable period of the closure. An intimation should also be sent to the State Government and to the Inspector as soon as the factory or the portion or the department of the factory, as the case may be, starts working again, provided that intended closure does not include closure due to holidays.(2)The occupier or manager of every factory shall furnish the information prescribed in sub-rule (I) in Form no. 29.

101. Service of notices.

- 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.

102. Information required by the Inspector.

- The occupier, owner or manager of a factory shall furnish any information that an Inspector may require for the purpose of satisfying himself whether any provision of the Act or Rules thereunder 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.

103. Muster roll.

- The manager of every factory shall maintain a muster-roll of all the workers employed in the factory in Form 22, showing (a) the name of each worker, (b) the nature of his work and (c) the daily attendance of the worker;Provided that, if the daily attendance is noted in the Register of Adult Worker in Form no. 12 or the particulars required under this Rule are noted in any other register, a separate muster-roll required under this rule need not be maintained.

103A. Overtime slips.

- Any work done by a worker beyond the normal period of work, shall be entered in a overtime slip in Form no 10-A in duplicate indicating therein the actual period of overtime worked by him and a copy thereof, duly signed by the manager or by some other responsible person shall be given to the worker immediately after the completion of the overtime work:Provided that if the Chief Inspector is satisfied for reasons to be recorded that it is not necessary to enforce this rule in any factory or in any class of factories or that any other record maintained in any factory fulfils the purpose of this rule, he may exempt the factory or the class of factories by an order in writing subject to such conditions and to such extent as he may specify.

104. Register of Accidents.

- In every factory a register of accidents shall be maintained in Form no. 26 in which complete details as required to be furnished in the said form, in respect of every accident, as specified in section 88 of the Act and in the Schedule attached to rule 96, which may occur in the factory shall be clearly and legibly entered within twelve hours of the occurrence of the accident:Provided that the information required to be furnished in column 6 of Form 23 may be entered within twelve hours of the return of the injured worker to his duties; andProvided further that in case of an accident as specified in Sub-Clause (c) of Clause (i) of the Schedule attached to rule 96, the details of the accident may be entered in the register within 12 hours of the time when the fact that the injury was likely to prevent the injured person from working for not less than 48 hours comes to the notice of the manager or of the person under whom the said person was employed.

105. Maintenance of inspection book.

- The manager of every factory shall maintain a bound inspection book and shall produce it when so required by the Inspector or Certifying Surgeon.

106.

The Manager shall be responsible for the supply and replacements of tight fitting clothings referred to in section 22.

107. Railways in factories.

- Rules 108 to 122 shall apply to railways in the precincts of a factory which are not subject to the Indian Railways Act, 1890.

108. 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.

109. Barriers and turngates.

(1)Where buildings or walls contain doors or gates which open on to railway track, a barrier about 3 feet 6 inches high shall be fixed parallel to and about 2 feet away from the building or wall outside the opening and extending several feet beyond it at either end, so that a 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 an approaching train.(2)If the distance between wall and track cannot be made to accommodate such a barrier, the barrier or a turngate shall be placed at the inside of the opening.(3)Where a footway passes close to a building or other obstruction as it approaches a railway track, a barrier shall be fixed at the corner of the building projecting several feet from it in a direction parallel to the track, so that person approaching the track is compelled to move away from the building and thus obtain timely sight of a train approaching behind it. Where the footway is too narrow to permit of this a turngate shall be installed.

110. Crowds.

(1)Workers pay-windows, first-aid stations and other points where a crowd may collect shall not be placed near a railway track.(2)At those times of the day when the employees are starting or ending work, all railway traffic shall cease for not less than five minutes:Provided that the Chief Inspector may by an order in writing exempt a specified factory from the provision of sub-rule (2) if he is satisfied that in the special circumstances of such factory the enforcement of the rule is not necessary to safeguard the employees.

111. Locomotives.

(1)Every locomotives (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 replaced at once.(2)Water gauge glasses of every locomotive, whatever its boiler pressure may be, shall be protected with substantial glass or metal screens.(3)Every locomotive shall be fitted with a "cow catcher" or if this is impracticable with 'guard-irons', at each end.(4)It shall be clearly indicated on every locomotive crane in English and ,in the vernacular for what weight of load and at what radius the crane is safe.

112. Wagons.

- Every wagon (and passenger coach, if any shall be provided either with continuous Self-acting brakes or with efficient handbrakes in good working order and capable of being applied by a person on the ground and fitted with a device for retaining them in the applied position.

113. Riding on vehicles.

(1)No person shall be permitted to be upon (whether inside or outside) any locomotive or vehicle except where secure foothold and holds are provided.

114. Attention to brakes and doors.

(1)No vehicle shall be left unattended unless its brakes are firmly applied and. where the railway is on a gradient, without sufficient number of properly constructed scotches placed firmly in position.(2)No train shall be set in motion until the shunting Jamadar has satisfied himself that all wagon doors are securely fastened.

115. Projecting loads and cranes.

(1)If the load on a wagon projects beyond its length, a guard or dummy-truck shall be used beneath the projection.(2)Loco-crane shall travel light unless the jib is completely lowered into the running position in line with the track.(3)When it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the crane has come to rest.

116. Loose-shunting.

(1)Loose shunting shall be permitted only when it cannot be avoided. It shall never be performed on a vehicle not accompanied by a man capable of applying and pinning down the brakes. A vehicle not provided with brakes in good working order and capable of being easily pinned down shall not be loose-shunt unless attached to it atleast one other vehicle with such brakes. Loose-shunting shall not be performed with, or against a vehicle containing passengers, live-stock or explosives.(2)For the purpose of this rule "loose-shunting" means the placing of a vehicle by giving it such an impetus from the locomotive that it can run along to the desired position.

117. Fly shunting.

(1)Fly-shunting shall not be permitted on any factory railway.(2)For the purposes of this- rule "fly-shunting" means giving an impetus to vehicles as in loose shunting but with the vehicles unattached (with or without some distance between them), and placing one vehicle (or set of vehicles) on one track and then smartly reversing the points so that the following vehicle or locomotive take the other track.

118. The shunting jamadar.

(1)Every train in motion in a factory shall be in charge of properly trained jamadar.(2)Before authorising the driver to proceed the shunting jamadar shall satisfy himself that no person is under or between the vehicles or on the track in front of the train. He shall not call on the driver while any person is going off the track but only when all persons have gone off it.

119. 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 Railway Act (IX of 1890).

120. Night work and fog.

(1)In factories where employees work at night no movements of railway vehicles otherwise than by hand shall be permitted by the manager between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than one foot candle as measured at ground level out of doors by any recognised type of photometer or illumination meter at a time when the atmosphere is free from dust or obscuring fumes.(2)In no circumstances shall any train be moved, otherwise than by hand between sunset and sunrise or at any time when there is fog unless it carries a white head light and a red rear light.

121. Speed control.

(1)Train shall not be permitted by the manager to proceed at speeds greater than four miles per hour.(2)A train shall not be moved by mechanical or electrical power unless it is proceeded at a distance of not less than 30 yards during the whole of its journey by the shunting jamadar. He shall be provided with the signalling flags or lamp necessary for its control by day or by night, and with a whistle for calling the attention of the driver:Provided that the Chief Inspector may by an order in writing exempt a specified factory or specified part of it, or all or any of the trains traversing it, from the operation of all or any of the provisions of this rule on such terms and conditions as he considers necessary for safety.

122. Railway tracks.

(1)Trains shall not be moved by power upon any railway track installed in a factory unless the railway, its equipments and vehicles conform with this rule.(2)The distances (a) between tracks and (b) between tracks and buildings or blind walls and (c) between tracks and materials deposited on the ground shall be respectively not less than:-(a)from centre to centre of parallel tracks, the overall width of the widest wagon of that gauge plus twice the width of the door of such a wagon when opened directly outward, plus 3 feet;(b)from a building or wall other than a loading platform to the centre of the nearest track, half the overall width of widest wagon of that gauge, plus the width of the door of such wagon when opened directly outward, plus 5 feet;(c)from material staked or deposited alongside the track, on the ground or on a loading platform, to the centre of the track, half the width of the widest wagon of that gauge, plus the width of its door when opened directly outward, plus 3 feet:Provided that the Chief Inspector may by an order in writing exempt a specified factory or specified part of it from all or any of the provisions of this sub-rule to such extent and on such conditions as he deems necessary.(3)Within the factory precincts sleeper shall not be raised above ground level.(4)All track ends shall be equipped with buffer stops of ample strength.(5)Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a

building or a wall which conceals an approaching train from view, between the building and the track as prescribed in sub-rule (1) of rule 109.(6)Where tracks are carried on a gantry or other elevation, a safe footway or footways with hand rails and the boards shall be provided at all positions where persons work 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 a grill through which a person cannot fail.(7)All point levers shall have their movements parallel to, not across, the direction of the track.(8)All loading platforms which are more than 2 feet above the level of the ground on which the track is laid and more than 50 feet in length shall be provided with steps at intervals not greater than 50 feet apart to enable the platform to be easily mounted the track.(9)On every locomotive weighing 15 tons or more when empty the brakes shall be capable of being applied by steam or other power as weir as by hand; or there are separate and distinct power and hand brakes.

123. Motor vehicles.-Speed of cars.

- No road motor vehicle shall be permitted to be driven at a speed exceeding [16 kilometers] [Substituted for 10 miles.] per hour within the precincts of a factory:Provided that in the case of large factories with department separated by considerable distances and having roads of ample width, the Inspector may grant exemption by an order in writing from this rule to such extent and on such terms as he deems suitable.

124. Car lights.

- No motor vehicle shall be driven at night within the precincts of a factory unless it conforms in respect of lights to the law in force on public roads in that locality.[Chapter XI] [Inserted by Notification-No. 2/FI-1079/90-L & E 521, dated 30.12.1992.] Control of Industrial Major Accident Hazardous Rules, 1990

1. Short title and commencement.-(1) These Rules may be called the "Control of Industrial Major Accident Hazardous Rules, 1990".

(2)They shall come into force with immediate effect.(3)These Rules supplement the Rules already notified under Chapter IV-A of the Factories Act, 1948.

2. Definition.-In these Rules, unless the context otherwise requires.-

(a)"Hazardous chemical" mean:-(i)any chemical which satisfies any of the criteria laid down in part I of schedule 1 and is listed in column 2 of part II of this schedule; or(ii)any chemical listed in Column 2 of Schedule 2; or(iii)any chemical listed in Column 2 of Schedule 3;(b)"Industrial activity" means,-(i)an operation or process carried out in an industrial installation referred to in Schedule 4, involving or likely to involve one or more hazardous chemicals and includes on site storage or on-site transport which is associated with that operation or process as the case may be; or(ii)isolated storage.(c)"isolated storage" means storage where no other manufacturing process other than

pumping of hazardous chemical is carried out and that storage involves at least quantity of that chemical set out in Schedule 2, but does not include storage associated with an installation specified in Schedule 4 on the same site,(d)"major accident" means an occurrence (including in particular a major emission, fire or explosion) involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or owing to natural events, leading to a serious danger to persons, whether immediate or delayed, inside or outside the installation or damage to property or adverse effects on the environment.(e)"pipeline" means a pipe (together with any apparatus and works associated therewith), or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical, other than flammable gas as set-out in column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute.(f)"Schedule" means schedule appended to these (Rules)(g)"site" means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of occupier.(h)Words and expressions not defined in these Rules but defined or used in the Factories Act, 1948 and the Rules made thereunder have the same meaning as assigned therein.

3. Collection, development and dissemination of information.-(1) This Rule shall apply to an industrial activity in which a hazardous chemical which satisfies any of the criteria laid down in Part I of Schedule 1 and is listed in Column 2 of Part II of this Schedule is or may be involved.

(2)An occupier, who has control of an industrial activity in terms of sub-rule (1) of this Rule, shall arrange to obtain or develop detailed information on hazardous chemical in the form of a material safety data sheet as indicated in Schedule 5. The information shall be accessible to workers upon request for reference.(3)The occupier while obtaining or developing a material safety data sheet as indicated in Schedule 5 in respect of a hazardous chemical handed by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemicals available, it shall be added to the material safety data sheet as indicated in Schedule 5 as soon as practicable.(4)Every container of a hazardous chemical shall be clearly labelled or marked to identify-(a)the contents of the container;(b)the name and address of the manufacturer or importer of the hazardous chemical; and(c)the physical, chemical and toxicological data of the hazardous chemical.(5)In terms of sub-rule (4) of this Rule where it is impractical to label a chemical in view of the size of the container or the nature of the package, provision should be made for other effective means like tagging or accompanying documents.

4. General responsibility of the occupiers.-(1) This Rule shall apply to-

(a)an industrial activity, other than isolated storage, in which a hazardous chemical which satisfies any of the criteria laid in Part I of Schedule 1 and is listed in Column 2 of Part II of this Schedule therein is or may be involved; and(b)isolated storage in which there is involved a quantity of hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the Schedule for that chemical in Column 3 thereof.(2)An occupier who has control of

an industrial activity in terms of sub-rule (1) of this Rule shall provide evidence to show that he has:-(a)identified the major accident hazards; and(b)taken adequate steps to-(i)prevent such major accidents and to limit their consequences to persons and the environment; and(ii)provide the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.

5. Notification of Major accidents.-(1) Where a major accident occurs on a site, the occupier shall forthwith notify the Inspector and the Chief Inspector of that accident, and furnish thereafter to the Chief Inspector a report relating to the accident in instalments, if necessary in Schedule 6.

(2)The Chief Inspector shall on receipt of the report in accordance with sub- rule (1) of this Rule, shall undertake a full analysis of the major accident and send the requisite information to the Directorate General Factory Advice Service and Labour Institutes (DGFASLI) and the Ministry of Labour through appropriate channel.

6. Industrial activities to which Rules 7 to 15 apply.-(1) (a) Rules 7 to 9 and 13 to 15 shall apply to an industrial activity, other than isolated storage, in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in Column 3;

(b)Rules 10 to 12 shall apply to an industrial activity, other than isolated storage, in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in Column 4;(c)Rules 7 to 9 shall apply to an isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in Column 3; and(d)Rules 10 to 15 shall apply to an isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in Column 4.(2)For the purpose of Rules 7 to 15.-(a) a "new industrial activity" means an industrial activity which-(i)was commenced after the date of coming into operation of these Rules; or(ii)if commenced before that date, is an industrial activity in which there has been since that date a modification which would be likely to have important implications for major accident hazards, and that activity, shall be deemed to have been commenced on the date on which the modification was made; and(b)an "existing industrial activity" means an industrial activity which is not a new industrial activity.

7. Notification of Industrial activities.-(1) An occupier shall not undertake any industrial activity unless he has submitted a written report to the Chief Inspector containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the Chief

Inspector may agree and for the purposes of this sub-rule, an activity in which subsequently there is or is liable to be a quantity given in Column 3 of Schedules 2 and 3 or more of an additional hazardous chemical shall be deemed to be different activity and shall be notified accordingly.

(2)No report under sub-rule (1) of this Rule needs, to be submitted by the occupier, if he submits a report under Rule 10(1).

8. Updating of the notification under Rule 7.-Where an activity has been reported in accordance with Rule 7(1) and the occupier makes a change in it (including an increase or decrease in the maximum quantity of a hazardous chemical to which this Rule applies which is or is liable to be at the site or in the pipeline or the cessation of the activity) which affects the particular specified in that report or any subsequent report made under this Rule, the occupier shall forthwith furnish a further report to the Chief Inspector.

9. Transitional provision.-Where,-

(a)at the date of coming into operation of these Rules, an occupier who is in control of an existing industrial activity which is required to be reported under Rule 7(1); or(b)within 6 months after that date an occupier commences any such new industrial activity;it shall be sufficient compliance with that Rule if he reports to the Chief Inspector as per the particulars in Schedule 7, within 3 months after the date of coming into operation of these Rules or within such longer time as the Chief Inspector may agree in writing.

10. Safety reports.-(1) Subject to the following sub-rules of this Rule, an occupier shall not, undertake any industrial activity to which this Rule applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to the Chief Inspector at least 3 months before commencing that activity.

(2)In the case of a new Industrial activity which an occupier commences, or by virtue of sub-rule (2) (a) (ii) of Rule 6 is deemed to commence, within 6 months after coming into operation of these Rules, it shall be a sufficient compliance with sub-rule (1) of this Rule if the occupier sends to the Chief Inspector a copy of the report required in accordance with that sub-rule within 3 months after the date of coming into operation of these Rules.(3)In the case of an existing industrial activity, until five years from the date or coming into operation of these Rules, it shall be a sufficient compliance with sub-rule (1) of this Rule of the occupier on or before 3 months from the date of the coming into the operation of these Rules ends to the Chief Inspector, the information specified in Schedule 7 relating to that activity.

11. Updating of reports under Rule 10.-(1) Where an occupier has made a safety report in accordance with sub-rule (i) of Rule 10 he shall not make any modification to the industrial activity to which that safety report relates which could materially affect the particulars in that report, unless he has made a further report to take account of those modifications and has sent a copy of that report to the Chief Inspector at least 3 months before making those modifications.

(2)Where an occupier has made a report in accordance with rule 10 an d sub- rule (1) of this Rule and that industrial activity is continuing, the occupier shall within three years of the date of the last such report, make a further report which shall have regard in particular to new technical knowledge which has affected the particulars in the previous report relating to safety and hazard assessment, and shall within 1 month or in such longer time as the Chief Inspector may agree in writing, send a copy of the report to the Chief Inspector.

12. Requirement for further information. - Which in accordance with Rule 10(1), an occupier has sent a safety report relating to an industrial activity to the Chief Inspector, the Chief Inspector may, by a notice served on the occupier, require, him to provide such additional information as is specified in the notice and the occupier shall send that information to the Chief Inspector within such time as is specified in the notice or within such extended time as the Chief Inspector may subsequently specify.

13. Preparation of on-site emergency plans by the occupiers. - (1) An occupier who has control of an industrial activity to which this Rule applies shall prepare in consultation with the Chief Inspector, keep up to date and furnish ti the Chief Inspector and the Inspector an on-site-emergency plan detailing how major accidents will be dealt with on the site on which the industrial activity is carried on and that plan shall include the industrial activity is carried on and that plan shall include the name of the person who is responsible for safety on the site and the names of those who are authorised to take action in accordance with the plan in case of an emergency.

(2)The occupier shall ensure that the emergency plan prepared in accordance with sub-rule (1) of this Rule, takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan is informed of its relevant provisions.(3)The occupier shall prepare the emergency plan required under sub-rule (1) of this Rule-(a)in the case of a new industrial activity, before that activity is commenced, except that, in the case of a new industrial

activity which is commenced or is deemed to have been commenced before a date 3 months after the coming into operation of these Rules, by that date; or(b)in the case of an existing industrial activity within 3 months of coming into operation of these Rules.

14. Preparation of off-site emergency plans.-(1) It shall be the duty of. the District Collector or the District Emergency Authority designated by the State Government in whose area there is a site on which an occupier carries on an industrial activity to which this Rule applies, to prepare and keep up to date an adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the Authority shall consult the occupier, the Chief Inspector and such other persons as appear to the Authority to be appropriate.

(2)The occupier shall provide the District Collector or the District Emergency Authority with such information relating to the Industrial activity under his control as may be necessary to enable the District Collector or the District Emergency Authority to prepare an off-site emergency plan under sub- rule (1) of this Rule including the nature, extent and likely effects off-site of possible major accidents as well as any additional information as the District Collector or the District Emergency Authority may require in this regard.(3)The District Collector or the District Emergency Authority shall provide the occupier with information from the off-site emergency plan which relates to his duties under Rule 13 or sub-rule (2) of this Rule.(4)The District Collector or the District Emergency Authority shall prepare its emergency plan for any industrial activity required under sub-rule (1) of this Rule-(a)in the case of a new industrial activity, before that activity is commenced;(b)in the case of an existing industrial activity, within 6 months of its being notified by the occupier of the industrial activity.

15. Information to be given to persons liable to be affected by a major accident.-(1) The occupier shall take appropriate steps to inform persons outside the site who are likely to be in an area, which might be affected by a major accident at any site on which an industrial activity under his control to which this Rule applies is carried on either directly or through the District Emergency Authority about-

(a)the nature of the major accident hazard; and(b)the safety measures and the current behaviour which should be adopted in the event of a major accident.(2)The occupier shall take the steps required under sub-rule (1) of this Rule to inform persons about an industrial activity, before that activity is commenced, except that in the case of an existing industrial activity in which case the occupier shall comply with the requirements of sub-rule (1) of this Rule within 3 months of coming into operation of these Rules.

16. Disclosure of information notified under these Rules.-Where for the purpose of evaluating information notified under Rule 5 or Rules 7 to 15, the Inspector or the Chief Inspector or the District Emergency Authority discloses that information to some other person, that other person shall not use that information for any purpose except a purpose of the Inspector or the Chief Inspector or the District Emergency Authority disclosing it, as the case may be, and before disclosing that information, the Inspector, Chief Inspector or the District Emergency Authority disclosing it, as the case may be, and before disclosing that information, the Inspector, the Chief Inspector or the District Emergency Authority as the case may be, shall inform that other person of his obligations under this Rule.

17. Improvement notice.-(1) If an Inspector is of the opinion that an occupier-

(a)is contravening one or more of these Rules; or(b)has contravened one or more of these Rules in circumstances that make it likely that the contravention will continue or be repeated.He may serve on him a notice (in this Rule referred to as "an improvement notice") stating that he is of that opinion, specifying the Rule or Rules as to which he is in that opinion, giving particulars of the reasons why he is of that opinion, and requiring that occupier to remedy the contravention or, as the case may be, the matters occasioning it within such period as may be specified in the notice.(2)A notice served under sub-rule (1) of this Rule may (but need not) include directions as to the matters to be taken by the occupier to remedy and any contravention or matter to which the notice relates.

18. Power of the State Government to modify the schedules.-The State Government may, at any time, by notification in the Official Gazette, make suitable changes in the schedules.

Schedule 1

[See Rules 2 (a) (1), 3(1), 4(1) (a) and 4(2) (1)]Indicative Criteria and List of ChemicalsIndicative CriteriaPart-I (a) Toxic Chemicals:Chemicals having the following values of acute toxicity and which, owing to their physical and chemical properties are capable of producing major accident hazards.

SI.no.	Degree of toxicity	LD 50 absorbed orally in rates mg/kg bodyweight	LD 50 by cutaneous absorption in rats orrabbits mg/kg body weight	LC 50 absorbed by inhalation (4 hours) in ratsmg/litre.
1.	Extremely toxic	= 50	= 200	0.1-0.5
2.	Highly toxic	51-500	201-2000	0.5-2.0

(b)Flammable Chemicals:(i)Flammable gases.-Chemicals which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20 degree C or below;(ii)Highly flammable liquids.-Chemicals which have a flash point lower than 23 degree C and the boiling point of which at normal pressure is above 20 degree C;(iii)Flammable liquids.-Chemicals which have a flash point lower than 65 degree C and which remain liquid under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.(c)Explosives:Chemicals which may explode under the effect of flame, heat or photochemical condition, or which are more sensitive to shocks or friction than dinitrobenzene.

Part II – List of Hazardous Chemicals

Sl. No.	Name of the Chemical
1.	Acetone
2.	Acetone Cyanohydrine
3.	Acetylene Chloride
4.	Acetlone (Ethyne)
5.	Arcolein (2-Propenal)
6.	Acrylontirle
7.	Aldicarb
8.	Sldrine
9.	Alkyl Phthaiate
10.	Allyl Alcohol Acid and Salts.
11.	Allyiamine
12.	Aipha Naphthyl Thiourea (Antu)
13.	4-Aminodiphenyl Asbestos
14.	2-Aminophenol
15.	Amiton
16.	Ammonia
17.	Ammonium Nitrate
18.	Ammonium Nitrate in Fertilizers
19.	Ammonium Sulfamate
20.	Anabasine
21.	Aniline
22.	P-Anisidine
23.	Antimony & Compounds
24.	Antimony Hydride (Stibine)
25.	Arsenic Hydrice (Arisine)
26.	Arsenic Pentoxide, Arsenic (v)

27. Arsenic Trioxide, Arsenious (III)
28. Acid and Salts.
29. Azinphos-Ethyl
30. Azinphos-Methyl
31. Barium Azide
32. Benzene
33. Benzidine
34. Benzidine Salts
35. Benzoquinone
36. Benzoyl Chloride
37. Benzoyl Peroxide
38. Benzyle Chloride
39. Benzyl Canide
40. Beryllium (Powders, Compounds)
41. Biphenyl
42. Bis (2-Chloromethyl) Ketone
43. Bis (2, 4, 6-Trinitrophenyl) Amine
44. Bis (2-Chloroethyl) Sulphide
45. Bis (Chloromethyl) Ether
46. 2, 2-Bis (Tert-Buty iperoxy) Butane
47. 1, 1 -Bis (Tert-Buty peeohy) Cyclonexane
48. Bis-1,2 (Tribromophenoxy) Ethane
49. Bisphenol
50. Boron and Compounds
51. Bromine
52. Bromine Pentafluoride
53. Bromoform
54. 1, 3-Butadiene
55. Butane
56. N-Butanethiol
57. 2-Butanone
58. Butoxy Ethanol
59. Butyl Glycidal Ether
60. Tert-Butyi Peroxacetate
61. Tert-Butyl Petroxyisobutyrate
62. Tert-Butyl Peroxyisopropyl Carbonate
63. Tert-Butyl Peroxymalte

64. Tert-Butyl Peroxypivalate
65. Butyl Vinyl Ether Acids and Salts.
66. Butyamine
67. C9-Aromatic Hydrocarbon Fraction
68. Cadmium and Compounds
69. Cadmium Oxide (Fumes)
70. Calcium Cyanide
71. Captan
72. Captofol
73. Carbaryl (Sevin)
74. Cabofuran
75. Carbon Disulphide
76. Carbon Monoxide
77. Carbon Tetrachloride
78. Carbophenothion
79. Cellulose (use in explsovies)
80. Chlorates (use in explosives)
81. Chlordane
82. Chlorfenvinphos
83. Chlorinated Benzenes
84. Chlorine
85. Chlorine Dioxide
86. Chlorine Oxide
87. Chlorine Trifluoride
88. Chlormequate Chloride
89. Chloroacetal Chloride
90. Chloroacetaldehyde
91. 2-Chloroaniline
92. 4-Chloroaniline
93. Chlorobenzene
94. Chlorodiphenyl
95. Chloroepoxypropane
96. Chloroethanol
97. Chloroethyl Chloroformate
98. Chlorofluorocarbons
99. Chloroform
100. 4-(Chloroformy) Morpholine

101. Chloromethane
102. Chloromethyl Ether
103. Chloronit Tobenzene
104. Chloroprene
105. Chlorosulphuric Acid
106. Chloroprinitroobenzene
107. Chloroxuron
108. Chromium and Compounds
109. Coboit and Compounds
110. Copper and Compounds
111. Coumafuryl
112. Coumaphos
113. Coumatetralyl
114. Crimidine
115. Crimidine
116. Cumene
117. Cyanophos
118. Cyanotheate
119. Cyanuric Fluoride
120. Cyclehexane
121. Cyclohexanol
122. Cyclohexanone
123. Cyclphexamide
124. Cyclopentadiene
125. Cyclopentane
126. Cyclotetran ethylent Erranitramine
127. Cyclototimethylenetrinitra
128. DDT
129. Decabromodiphenyl Oxide
130. Demeton
131. Di-Isobutyryl Peroxide
132. Di-n-Propyl Peroxydicarbonate
133. Di-sec-Butyl Peroxydicarbonate
134. Dialifos
135. Diazedinitrophenol
136. Diazomethane
137. Dibenzyl Peroxydicarbonate

138. Dichloroacetylene
139. O-Dichlorobenzene
140. P-Dichlorobenzene
141. Dichloroethane
142. Dischloroethyl Ether
143. 2, 4-Dichlorophenol
144. 2, 6-Dichlorophenol
145. 2, 4 Dichlorophenoxy Acetic Acid(2,4-D)
146. 1, 2-Dichlorosalicylic Acid
147. 3, 5-Dichlorosalicylic Acid
148. Dichlorovos (DDVP)
149. Dicrotophos
150. Dieldrin
151. Diepoxybutane
152. Diethyl Peroxydicarbonate
153. Diethylene Glycol Dinitrate
154. Diethylene Triamine
155. Diethyleneglycol Butyl 1 Ether/ Diethyleneglycol ButylAcetate
156. Diethylenetrlamine (Deta)
157. Diglycidyl Ether
158. 2, 2-Dihydroperoxypropone
159. Disobutryl Peroxide
160. Dimefox
161. Dimethoate
162. Dimethyl Phosphoramidosyanidic Acid
163. Dimethyl Phthaiate
164. Dimethylcarbomoyl Chloride
165. Dimethylinitrosomine
166. Dinitrophenol Salts
167. Dinitrotoluene
168. Diitro-o-Cresol
169. Dioxane
170. Dioxathion
171. Dioxolane
172. Diphacinone
173. Diphosphoramie Octamethyl
174. Diprophylene Glycolmethylether

175. Disulfoton
176. Endosulfan
177. Endrin
178. Epichlorophydrine
179. EPN
180. 1, 2-Epoxypropane
181. Ethion
182. Ethyl Carbamate
183. Ethyl Either
184. Ethyl Haxanol
185. Ethyl Mercaptan
186. Ethyl Methacrylate
187. Ethyl Nitrate
188. Ethylene
189. Ethylene Chlorophydrine
190. Ethylene Diamine
191. Ethylene Dibromide
192. Ethylene Cichloride
193. Ethylene Glycol Dinitrate
194. Ethylene Oxide
195. Ethylene Limine
196. Fluenetil
197. Pensulphothion
198. Flenetil
199. 4-Fluoro, 2-Hodroxybutyric Acid and Salts, Esters, Amides,
200. Fluoroacetic Acid and Salts, Esters, Amides
201. Fluorobutyric Acid and Salts, Esters, Amides
202. 4 Fluorochrotonic Acid and Salts, Esters, Amides
203. Formaldehyde
204. Glyconitrile (Hydroxyacetonitrile)
205. 1, Guanyl-4 Nitrosamiaoguanyl 1-Tetrazene
206. Heptachlor
207. Hexachloro Cyclopentadiene
208. Hexachlorocy Clohexane
209. Hexachlorecy Clomethane
210. 1, 2, 3, 7, 8, 9-Hexachloroda-benzyo Dioxine.
211. Hexafluopropene

212. Hexamethylphosphoramide
213. 3, 3, 6, 6, 7, 8, Hexamethyl 1, 2, 4, 5, Tetroxacy, Clononane
214. Hexamethylenediamine
215. Hexane
216. 2, 2, 4, 4, 6, 6-Hexanitrostilbene
217. Hexavalent Chromium
218. Hydrazine
219. Hydrizine Nitrate
220. Hydrochloric Acid
221. Hydrogen
222. Hydrogen Bromide (Hydrobromic Acid)
223. Hydrogen Chloride (Liquefied gas)
224. Hydrogen Cyanide
225. Hydrogen Fluoride
226. Hydrogen Scienide
227. Hydrogen Sulphide
228. Hydroquinone
229. Iodine
230. Isobenzan
231. Isodrin
232. Isophorone Disocyanate
233. Isopropyl Eather
234. Juglone (5-Hydroxynaphthalene 1,4-Dione)
235. Lead (Inorganic fumes and dusts)
236. Lead 2, 4, 6-Trinitroreso-crinoxide (Lead Styphnate)
237. Lead Azide
238. Leptophos
239. Lindand
240. Liquefied Petroleum Gas (LPG)
241. Maleic Anhydride
242. Manganese and Compounds
243. Mercapto Benzothiazole
244. Mercury Alkyl
245. Mercury Fuslminate
246. Mercury Methyl
247. Methacrylic Anhydride
248. Methacrylonitrile

249. Methacryloyl Chloride
250. Methacryloyl Chloride
251. Methanesuphonyl Fluride
252. Methanethiol
253. Methoxy Ethanol (2-Methyl Cellosolve)
254. Methoxy Ethylmercuric Acetate
255. Methyl Acrylate
256. Methyl Alcohol
257. Methyl Alcohol
258. Methyl Bromide (Bromomethane)
259. Methyl Chloride
260. Methyl Chloroform
261. Methyl Cyclohexene
262. Methyl Ethyl Ketone Peroxide
263. Methyl Hydrazine
264. Methyl Isobutyl Ketone
265. Methyl Isobutyl Ketone Peroxide
266. Methyl Isocyanate
267. Methyl Isothiocyanate
268. Methyl Marcaptan
269. Methyl Methacryiate
270. Methyl Parathion
271. Methyl Phosphoric Dichloride
272. N-Methyl, 2, 4, 6-Tetranitroaniline
273. Methylene Chloride
274. 4,4-Methylenebis (2 Chloroaniline)
275. Methyltrihlorosilane
276. Mevinphos
277. Moiybdenum and compounds
278. N-Methyl-N, 2, 4, 6-N-Tetranitro-aniline
279. Nephtha (Coal Tar)
280. 2-Naphthylamine
281. Nickel and Compounds
282. Nickel Tetracarbonyl
283. O-Nitroaniline
284. P-Nitroaniline
285. Nitrobenzene

286. P-Nitrochlorobenzene
287. Nitrocyclohexane
288. Nitroethane
289. Nitrogen Dioxide
290. Nitrogen Oxides
291. Nitrogen Trifluoride
292. Nitroglycerine
293. P-Nitrophenol
294. 1-Nitropropate
295. 2-Nitropropate
296. Nitrosodi, ethyliamine
297. Nitrololune
298. Octabromophenyl Oxide
299. Oleum
300. Oleylamine
301. oo-Diethyl S-Ethylsulphinyi methyl Phosphorothioate
302. oo-Diethyl S-Ethylsulphony Imethyl Phosphorothioate
303. oo-Diethyl S-Ethylthiomethyl Phosphorothioate
304. oo-Diethyl S-Isopropylthiomethyl Phosphordithioate
305. oo-Diethyl S-Propylthiomethyl Phosphorodithioate
306. Oxyamyl
307. Oxy-lisulfoton
308. Oxygen (Liquid)
309. Oxygen Difluoride
310. Ozone
311. Paraoxon (Diethyl 4-Nitrophenyl Phosphate)
312. Paraquat
313. Parathion Methyl
314. Paris Green (Bis Aceto Hex-ametraarsenitoterta Copper)
315. Pentaborane
316. Pentabromodiphenyl Oxide
317. Pentabromophenol
318. Pentachoro Naphthalene
319. Pentachloroethane
320. Pentachlorophenol
321. Pentacrythrifol Tetranitrate
322. Pentane

323. Peracetic Acid
324. Perchloroethylene
325. Perchloromethyl Mercaptan
326. 2-Pentanone, 4-Methyl
327. Penol
328. Phenyl Glycidal Ether
329. Phenylene P-Diamine
330. Phenylmercury Acetate
331. Phorate
332. Phosacetim
333. Phosacetim
334. Phosfolan
335. Phosgene (Carbonyl Chloride)
336. Phosmet
337. Phosphamiden
338. Phosphine (Hydrogen Phosphide)
339. Phosphoric Acid and Esters
340. Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethyl Propyl)Bromoethyl Ester
341. Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethylpropyl)Chloroethyl Ester
342. Phosphoric Acid, Chloroethyi Bromo (2, 2-Dimethoxycpropyl)Chloroethyl Ester
343. Phosphorous and Compounds
344. Phostalan
345. Picric Acid (2, 4, 6-Trinitro-Phenol)
346. Polybrominated Biphenyls
347. Potassium Arsenite
348. Potassium Chlorate
349. Promurit (3, 4-Dichlorophenyl 3-Triazenethiocarboxamide)
350. 1, 3-Propanesultone
351. 1 Propen-2-Omoro 1, 3-Diol-diacetate
352. Propylene Dichloride
353. Propylene Oxide
354. Propylenelimine
355. Pyrazoxon
356. Selenium Nexmuoride
357. Semicarbazide Hydrochlorde
358. Sodium Arseun
359. Sodium Azice

360. Sodium Chlorate
361. Sodium Cyanide
362. Sodium Picramate
363. Sodium Selenite
364. Styrene, 11, 2, 2-Terachloroethane
365. Sulfotep
366. Sulphur Dichloride
367. Sulphur Dioxide
368. Sulphur Trioxide
369. Sulphuric Acid .
370. Sulphoxide, 3-Chloropropyioctyl
371. Tellurium
372. Tellurium Hexafluoride
373. TEPP
374. Terbufos
375. Alpha-Terabromobisphenol
376. 2, 2, 5, 6-Tetrachloro-2, 5-Cyclohexadiene-1, 4-Dione
377. 2, 3, 7, 8-Tetrachlorodibezo-p Diosin (CDD)
378. Tetrafluoroethane
380. Tetramethylene Diulphotetramine.
381. Tetramethyl Lead
382. Tetranitromethane
383. Thallium and Compounds
384. Thionazin
385. Thionyl Chloride
386. Tirpate
387. Toluene
388. Tolune-2-4-Diisocyanate
389. 0-Toluidine
390. Toluene 2, 6-Diisocyanate
391. Trans-1, 4 Chlorobutene
392. 1-TRI, (Cyclohexyl) StannyMH 1, 2, 4 Triazole
393. 1, 2, 4 Triazole
393A. 2, 5 Triamino 2, 4, 5, Trinitrobenzene.
394. 2, 4, 6-Tribromophenol
395. Trichloro Acetyl Chloride
396. Trichloro Ethane

397. Trichloro Napethalene
398. Trichloro Chloromethylsilane
399. Trichloro Dichlorophenylsilane
400. 1, 1-Trichloroethane
401. Trichloroethyl Sillane
402. Trichloroethylene
403. Trichloromethanesulphenyl
425. Vinyl Toluene
404. 2, 2, 6-Trichlorophenol
405. 2, 4, 5-Trichlorophenol
406. Triethylamine
407. Triethylenemelamine
408. Trimethyl chlorosilane
409. Trimethylopropane Phosphite
410. Trinitroaniline
411. 2, 4, 6 Trinitroanisole
412. Trinitrobenzene
413. Trinitrobenzoic Acid
414. 2, 4, 6-Trinitroresorcinol (Styphnic Acid)
417. Trinitrotoluene
418. Tricrthocresyl Phosphate
419. Triphenylin Chloride
420. Terpentine
421. Uranium and Compounds
422. Venadium and Compunds
423. Vinyl Chloride
424. Vinyl Fluoride Chloride
426. Warfarin
427. Xylene
428. Xylidine
429. Zinc and Compounds
430. Zironium and Compounds.

Schedule 2

[See Rules 2(a) (ii), 4(1) (b), 4(2) (1) and 6(1) (c) and (d) x]Isolated storage of Installation other than those covered by Schedule 4(a)The quantities set out below relate to each installation or group of installations belonging to the occupier where the distance between installations is not sufficient to avoid in foreseeable circumstances, any aggravation of major accident hazards. These quantities

apply in any case to each of the installations belonging to the same occupier where the distance between the installations is less than 500 metres.(b)For the purpose of determining the quantity of a hazardous chemical at an isolated storage, account shall also be taken of any hazardous chemical which is:-(i)in that part of any pipeline under the control of the occupier having control of the site which is within 500 metres of that site and connected to it;(ii)at any other site under the control of the occupier any part of the boundary of which is within 500 metres of the said site; and(iii)in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it.But no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft for transporting it.

		Quantity (tonnes)	
Serial no.	Chemical or group of chemicals	For application of Rules 4, 5 and 7 to 9	For application of Rules 10 to 15
1	2	3	4
1.	Acrylonitrile	350	5,000
2.	Ammonia	60	601
3.	Ammonium nitra (a)	350*	2,500*
4.	Ammonium nitrate fertilizers (b)	1,250	10,000
5.	Chlorine	10	25
6.	Flammable gases as defined in Schedule 1 paragraph (b) (i)	50	300
7.	Highly flammable liquids as defined in Schedule 1, paragraph(b) (ii)	10,000	1,00,000
8.	Liquid oxygen	200	2,000
9.	Sodium chlorate	25	250
10.	Sulphur dioxide	20	50
11.	Sulphur trioxide	15	100

* Where this chemical is in a state which gives it properties capable of creating a major accident hazard.(a)This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28 percent by weight and to adequous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90 percent by weight.(b)This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28 percent by weight (a compound fertilizer contains ammonium nitrate together with phosphate and/or potash).

Schedule 3

List of hazardous chemicals for application of Rules 5 & 7 to 15(a)The quantities set out below relate to each installation or group of installations belonging to the same occupier where the distance between the installation is not sufficient to avoid inforeseeable circumstances, any aggravation of major accident hazards. These quantities apply in any case to each group of installations belonging

to the same occupier where the distance between the installation is less than 500 metres.(b)For the purpose f determining the quantity of a hazardous chemical in an industrial installation, account shall also be taken of any hazardous chemical which is :-(i)in that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres of that site and connected to it;(ii)at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and(iii)in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 meters of it;but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.Part-1 Named Chemicals {||-| Serial no.| Chemical| QuantityFor application of Rules 5, 7to 9 and 13 to 15.|| CAS numberFor application of Rules 10to 12.|-| 1| 2| 3|| 4|-| Group-I Toxic Chemicals| kg-|||-| 1.| Aldicarb| 100| ...| 116-06-3|-| 2.| 4-Aminodipheny| 1| ...| 92-67-1|-| 3.| Amiton| 1| ...| 78-53-5|-| 4.| Anabasine| 100| ...| 494-52-0|-| 5.| Arsenic pentoxide, Arsenic (V) acid and salts| 500| ...| ...|-| 6.| Arsenic trioxide, Arsenious (III) acid and salts| 100| ...| ...|-| 7.| Arsine (Arsenic hydride)| 10| ...| 778442-1|-| 8.| Azinphos-ethyl| 100| ...| 2642-71-9|-| 9.| Azinphos-methyl| 100| ...| 86-50-0|-| 10.| Benzidine| 1| ...| 92-87-5|-| 11.| Benzidino salts| 1| ...| ...|-| 12.| Beryllium (powders, compounds)| 10| ...| ...|-| 13.| Bis (2-chloroethyl) sulphide| 1| ...| 505-60-2|-| 14.| Bis (chloromethyl) ether| 1| ...| 542-88-1|-| 15.| Carbofuran| 160| ...| 1563-66-2|-| 16.| Carbophenothion| 160| ...| 786-19-6|-| 17.| Chlorofenvinphos| 100| ...| 470-90-6|-| 18.| 4-(Chloroformy) morpholire| 1| ...| 15159-10-7|-| 19.| Chloromethyl methyl ether| 1| ...| 107-30-2|-| 20.| Cobit metal, oxide, Carbonates sulphides, as powders| 1t| ...| ...|-| 21.| Crimidme| 100| ...| 535-89-7|-| 22.| Cyanthoate| 100| ...| 3734-95-0|-| 23.| Cycloheximide| 100| ...| 66-81-9|-| 24.| Demeton| 100| ...| 8065-48-3|-| 25.| Dialifos| 100| ...| 10311-84-9|-| 26.| Co-Diethyl S-enthlsulphinyl methyl phoshorothiate| 100| ...| 2588-06-8|-| 27.| oc-Diethyl S-ethylsulphonyl, Methyl| 100| ...| 2588-06-9|-| 28.| Phosphorothioate Diethyl| 100| ...| 2600-69-3|-| 29.| S-othylthiomelhyl, phosphorothioate oc-DiethylS-isoprophithio-methyl| 100| ...| 78-52-4|-| 30.| phosphorodihioate oc-Diethyl| 100| ...| 3309-68-0|-| 31.| S-prophlthiomethyl phosphorothioate Dimefox| 100| ...| 115-26-4|-| 32.| Dimethylcarbamoyl chloride| 1| ...| 70-44-7|-| 33.| Dimethylcarbamoyl| 1| ...| 62-75-9|-| 34.| Dimethylphosphoramidocyanidic acid| 1| ...| 63917-41-9|-| 35.| Diphacinone| 100| ...| 82-66-6|-| 36.| Disulfoton| 100| ...| 298-04-4|-| 37.| EPN| 100| ...| 2104-64-5|-| 38.| Ethion| 100| ...| 563-12-2|-| 39.| Fensulfothion| 100| ...| 115-90-2|-| 40.| Flueretil| 100| ...| 4301-50-2|-| 41.| Fluoroacetic acid| 100| ...| 144-94-0|-| 42.| Fluoroacetic acid esters| 1| ...| ...|-| 43.| Ditto| 1| ...| ...|-| 44.| Fluoroacetic acid amides| 1| ...| ...|-| 45.| 4-Fluorobutyric acid| 1| ...| 462.23-7|-| 46.| 4-Fluorobutyric acid salts| 1| ...| ...|-| 47.| 4-Fluorobutyric esters| 1| ...| ...|-| 48.| 4-Fluorobutyric acid amides| 1| ...| ...|-| 49.| Fluorocrotonic acid| 1| ...| 37759.72-1|-| 50.| Ditto| 1| ...| ...|-| 51.| Ditto| 1| ...| ...|-| 52.| 4.4 Fluorocrotnic acid, amides| 1| ...| ...|-| 53.| Fluoro-2-bydroxy butyric acid| 1| ...| ...|-| 54.| 4-Fluoro-2-hydroxy butyric acid, salts| 1| ...| ...|-| 55.| 4-Fluoro-2-hydroxy butyric acid esters.| 1| ...| ...|-| 56.| 4-Fluoro-2-hydroxy butyric acid, amides.| 1| ...| ...|-| 57.| Glycolonitrile (hydroxyacetonitrile.)| 100| ...| 107-16-4|-| 58.| 1, 2, 3, 7, 8, 9-Hexachlorodibonzo p-dioxin.| 100| ...| 19408-74-3|-| 59.| Hexamethylpho-sphoramide| 11| ...| 680-31-9|-| 60.| Hydroges selexide| 10| ...| 7783-07-5|-| 61.| Isodrin| 100| ...| 297-78-9|-| 62.| Isodrin| 100| ...| 465-73-6|-| 63.| Juglone (5-Hydroxynaphthalene-1, 4-dione.)| 100| ...| 481-39-0|-| 64.| 4,4-Methylenebis (2-chloroaniline).| 1| ...| 101.14.0|-| 65.| Methyl isocyanate| 150| 150 kg.| 624-83-9|-| 66.| Mevinphos| 100| ...| 7786-34-3|-| 67.| 2-Naphthyl lamine| 1| ...| 91-59-3|-| 68.| Nickel metal, oxides, carbonates

sulphide, as powders.| 1t| ...| ...|-| 69.| Nickel tetracarbonyl| 10| ...| 13463-39-3|-| 70.| Oxydiiulfolton| 100| ...| 13463-39-3|-| 71.| Oxygen diffueride| 10| ...| 7783-41-7|-| 72.| Paraoxon (diethyl 4-nitrophenyl phosphate)| 100| ...| 311-45.5|-| 73.| Parathion| 100| ...| 56-38-2|-| 74.| Parathion-methyl| 100| ...| 298.000.0|-| 75.| Pentaborane| 100| ...| 19624.22-7|-| 76.| Phoratel| 100| ...| 298.02-2|-| 77.| Parathion| 100| ...| 56-38-2|-| 78.| Phosgene (carbonyl chloride)| 750| 75 ½ kg| 75-44.5|-| 79.| Phosphamidon| 100| ...| 13171-21.6|-| 80.| Phosphine (Hydrogen phosphide)| 100| ...| 7803-51.2|-| 81.| Promurit (1 -(3, 4-Dichlorophenyl)-3-triazenethiocarboxamide).| 100| ...| 5836-73-7|-| 82.| 1, 3 Propanesultone| 1| ...| 1120-71-4|-| 83.| 1 -Propen-2-chloro-1, 3-diol discetate)| 10| ...| 10118-72-6|-| 84.| Pyrazoxon| 100| ...| 108-34.9|-| 85.| Selenium hexafluoride| 10| ...| 7783-79-1|-| 86.| Sodium selenite.| 100| ...| 10102-18.8|-| 87.| Stibine (Antimony hydride)| 100| ...| 7803-52-3|-| 88.| Sulfotop| 100| ...| 3689-24.5|-| 89.| Sulphur dichloride| 1t| ...| 10545-99.0|-| 90.| Telurium hexafluoride| 100| ...| 7783-80-4|-| 91.| TEPP| 100| ...| 107-49.3|-| 92.| 2, 3, 7, 8 Tetrachlorodibenze-P-dioxin (TCDD)| 1| ...| 1746-01.6|-| 93.| Tetramethylendiscul-phetetramine| 1| ...| 80-12.6|-| 94.| Thionazin| 100| ...| 297-97-2|-| 95.| Tripate (2, 4-Dimethyl-1, 3-dithio-lane-2-carboxaldehyde 0-methyl-carbemey lexime).| 100| ...| 26419-73-8|-| 96.| Trichleremethanesulphenyl chloride.| 100| ...| 194-42-3|-| 97.| 1-Tri (cyclehexyl) stannyl 1-1 -H 1, 2, 4-triazele.| 100| ...| 41083-11-8|-| 98.| Triethylenemelamine| 10| ...| 51-18.3|-| 99.| Warfarin| 100| ...| 81-81-2|-| Group 2 Toxic Chemicals (Quantity-1 tonne)||||-| 100.| Acetone cyanehydrin| 200t| ...| 75-86-5|-| 101.| Acrelein (8-Propenal)| 20t| ...| 107-02-8|-| 102.| Acrylonitrile| 20t| 200t| 107-13-1|-| 103.| Alyalcohal (2-propen-1-01)| 200t| ...| 107-13-1|-| 104.| Allylamine| 200t| ...| 107-11-9|-| 105.| Ammonia| 50t| 500t| 7664-41-7|-| 106.| Bromine| 40t| ...| 7726-95-6|-| 107.| Carbon disulphide| 20t| 200t| 75-15-0|-| 108.| Chlorine| 10t| 25t| 7782-50-5|-| 109.| Diphyenl methane di-isocya-nate (MDI)| 20t| ...| 101-68-8|-| 110.| Ethylene dibremide (1, 2-Dibromo-methane).| 5t| ...| 106-93 4|-| 111.| Ethyleneimine| 50t| ...| 151-56-4|-| 112.| Formaldehyde (concentration 9%)| 5t| ...| 50.00.0|-| 113.| Hydrogen cyanide (liquefied gas)| 25t| 250t| 7647-01.0|-| 114.| Hydrogen cyanide| 5t| 20t| 74-91.8|-| 115.| Hydrogen flouride| 5t| 50t| 7664-39.3|-| 116.| Hydrogen flouride| 5t| 50t| 7783-06.4|-| 117.| Methyl bromide (Bromomethane)| 20t|| 74-83.9|-| 118.| Nitrogenoxides| 50t| ...| 11104-93-1|-| 119.| Prophleneimine| 50t| ...| 75-55-8|-| 120.| Sulphur dioxide| 20t| 250t| 7446-09-5|-| 121.| Sulphur trioxide| 15t| 75t| 746-11-9|-| 122.| Tetramethyl lead| 5t| ...| 75-74-1|-| 123.| Tetraethyl lead| 5t| ...| 75-74-1|-| 124.| Toluene di-isocyanate (TDI)| 10t| ...| 584-84-9|-| Group 3- Highly reactive chemicals||||-| 125.| Acetylene (ethyne)| 5t| ...| 74-86-2|-| 126.| Ammonium nitrate (1)| 350t| 250t| 6484-52-2|-| 127.| 1,2 Bis (tert-butyl-peroxy cycloh-exane) cyclohexane(concentration-80%)| 5t| ...| 3006-86-8|-| 128.| 1, 1 -Bis (tert-butyl-peroxy) cyclohexane (concentration-80%)| 5t| ...| 3006-86-8|-| 129.| Tert-Butyl peroxyacetate (concentration-70%)| 5t| ...| 107-71-1|-| 130.| Tert-Butyl peroxyisobyrate (concentration-80%)| 5t| ...| 109-13-7|-| 131.| Tert-Butyl peroxy-isoprophyl carbonate (concentration-80%)| 5t| ...| 2372.21-6|-| 132.| Tert-Butyl peroxy-maleate (concentration-80%)| 5t| ...| 1931-62.0|-| 133.| Tert-Butyl peroxypivalate (concentration-77%)| 50t| ...| 927-07.1|-| 134.| Dibenzyl perodicarbonate (concentration-90%)| 5t| ...| 2144-45.8|-| 135.| Di-sec-butyl peroxydicarbonate (concentration-80%)| 5t| ...| 19910-65.7|-| 136.| Diethyl peroxydicarbonate (concentration-30%)| 50t| ...| 14666-78-5|-| 137.| 2, 2-Dihydreperoxyprepane (concentration-30%)| 5t| ...| 2614-76.8|-| 138.| Di-isobutryl paroxide (concentration-50%)| 50t| ...| 3437-84-1|-| 139.| Di-n-propyl perpoxydicarbonate (concentration-80%)| 5t| ...| 16066-38-9|-| 140.| Ethylene oxide| 5t| 50t| 75-21-8|-| 141.| Ethyl nitrate| 50t| ...| 625-58-1|-| 142.| 3, 3, 6, 6, 9, 9-Hexamethyl-1, 2, 4,

5-tetroxacy clonance(concentration-75%)| 50t| ...| 22397-33-7|-| 143.| Hydrogen| 2t| 50t| 1333-74-0|-| 144.| Liquid oxygen| 200t| ...| 7782-44-7|-| 145.| Methylethyl ketone peroxide (concentration-60%)| 5t| ...| 1338-23.4|-| 146.| Methylisobutyl ketone peroxide (concentration-60%)| 50t| ...| 37206-20.5|-| 147.| Peracetic acid (concentration-60%)| 50| ...| 79-213|-| 148.| Propylene oxide| 5t| ...| 75-56-9|-| 149.| Sodium chlorate| 251| ...| 7775-09-9|-| Group 4-Explosive Chemicals||||-| 150.| Barium azide| 50t| ...| 18810-58-7|-| 151.| Bis (2, 4, 6-trinito phenyl) amine| 50| ...| 131-73-7|-| 152.| Chloetetrinitrobenzene| 50t| ...| 28260-61-9|-| 153.| Cellulose nitrate (Containing 12.9% nitrogen)| 50t| ...| 9004-70-0|-| 154.| Cycletetramethyiene teranitramine| 50t| ...| 2691-41-0|-| 155.| Cyclotrimethylene trinitroamine| 50t| ...| 121-82-4|-| 156.| Diazodinitrophenel| 10t| ...| 7008-81-3|-| 157.| Diethylene glycel dinitrate| 10t| ...| 693-21-0|-| 158.| Dinitrophenel, salts| 50t| ...||-| 159.| Ethylene glycel dinitrate| 10t| ...| 628-96-6|-| 160.| 1 -Guanyl-4-nitrosamineoguanyl 1 -tetrazene| 10t| ...| 109-27-3|-| 161.| 2, 2, 14, 4, 6, 6-Hexanitrostilbeneo| 50| ...| 20062-22-0|-| 162.| Hydrazine nitrate| 50t| ...| 13464-97-6|-| 163.| Lead azide| 50t| ...| 13424-46-9|-| 164.| Lead styphnate (lead 2, 4, 6-trinitro-resorcinexide).| 50t| ...| 15245-44-0|-| 165.| Mercury Fulminate| 10t| ...| 628-86-4|-| 166.| N-Methyl-N, 2, 6-tetranitroaniline| 50t| ...| 479.45-8|-| 167.| Nitrogylcerine| 10t| 10t| 55-63-0|-| 168.| Pentacrylhritol tetranitrate| 50t| ...| 78-11-5|-| 169.| Picric acid (2, 4, 6-Trinitrophenol)| 50t| ...| 81-89-1|-| 170.| Sodium kpicramate| 50t| ...| 831-52-7|-| 171.| Styphnic acid (2, 4, 6-Trinitroreser-cinol).| 50t| ...| 82-71-3|-| 172.| 1, 3, 5-Triamino-2, 4, 6-trinitrobenzene| 50t| ...| 3058-38-6|-| 173.| Trinitroaniline| 50t| ...| 26952-42-1|-| 174.| 2, 4, 6-Trinitroanisole| 50t| ...| 606-35-9|-| 175.| Trinitrobenzene| 50t| ...| 25377-32-6|-| 176.| Trinitrobenzoic acid| 50t| ...| 35860-50-5|-| 177.| Trinitrocresol| 50t| ...| 28905-71-7|-| 178.| 2, 4, 6, Trinitrophenetole| 50t| ...| 4732-14-3|-| 179.| 2, 4, 6 Trinitrotoulene| 50t| 50t| 118-96-7|}

Schedule 4

[See Rule 2(b)(1)]Industrial installation within the meaning of Rule 2(b)(i)

1. Installation for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among others :

(a)alkylation(b)amination by amonolysis(c)carbonylation(d)condensation(e)dehydrogenation(f)estofication(g)halogenation and manufacture of halogene(h)hydrogenation(i)hydrolysis(j)oxidation(k)polymerization(l)sulphonation(m)desulphurization, manufacture and transformation of sulphur-containing compounds.(n)nitration and manufacture of nitrogen-containing compounds(o)manufacture of phosphorous-containing compounds(p)formulation of pesticides and pharmaceutical products(q)distillation(r)extraction(s)salvation(t)mixing

2. Installation for distillation, refining or other processing of petroleum or petroleum products.

3. Installations for the total or partial disposal of solid or liquid chemicals by incineration or chemical discomposition.

4. Installation for the production, processing or treatment of energy gases, for example, LPG, LNG, SNG.

5. Installation for the dry distillation of coal or lignite.

6. Installation for the production of metals or non-metals by wet process or by means of electrical energy.

Schedule 5

(Format of a Material Safety Date Sheet)[See Rules 3(2) and (3)]

Identity of Material			
Product Name	Chemical Designation		
Trade Name	Synonymus		
Formula	Lable: Category Class	CAS Number	UN Number
RegulatedIdentification	Shipping NameCodes/Lable		HAZCHEMCode
Hazardous WasteIdentification Number			
Hazardous Ingredients		CAS Number	
1.	;		
2.	;		
3.	;		
4.	;		
2. Physical and Chemical Properties			
Physical State(Gas, Liquid, solid)	Boiling Point in degree C	Vapour pressure at 35 degree C mm Hg.	
Appearance	Melting/Freezing point in degree C	Evaporation rate at 30 degree C	
Vapour	Vapour Density (air-1)	Solubility in water at 30 degree C	

Others (corrosivity etc.)	Specific Gravity (water-1)	PH		
3. Fire and Explosive Hazards Data				
Explosion/ Flammability	Flash point (deg.) C	LEL %	Auto ignition Temperature degree C	
	Flash point (deg.) C	UEL %	TDG Flammability (Classification)	
4. Reactive Hazards				
Stability to	Impact	Hazardous	Combustion Products	
Static Discharge Reactivity	(Hazardous Decomposition Products)(conditions to avoid)			
Hazardous Polymerisation	May/May not occur	(Conditions to avoid)		
Incompatibility Materials to avoid				
5. Health Hazard Data				
Routes of Entry :	(Inhalation, Skin, mucuous membrances and eye contact andingestion)			
Effects of Exposure/Symptoms :				
LD 50 (in rat) (Orally or percutaneous absorption)(mg/kg.Body weight)	LC 50 (in rat)(mg/1) 54 hour			
Permissible Limit (PEL)	Exposure	ppm	mg/cu.m	Short-term ppm mg/cu.mExposure
Threshold Value (TLV of AGIH)	Limit	ppm	mg/cu.m	Limit (STEL)OdourThres ppm mg/cu.m
Emergency Treatment :				
6. Hazard Specification				
NFPA Hazard Signal	Health	Flammability	Stability	Special
Known Hazards				
Combustible Liquid	Water Reactive Material	Irritant		
Flammable Material	Oxidiser			Sensitizer
Pyrophoric Material	Organic Peroxide			Carcinogen

Explosive Material	Corrosive Material	Mutagen
Unstable Material	Compressed Gas	Others (Specify)
7. Safe Usage Data		
Ventilation	General/MechanicalLocal Exhaust	
Protective Equipment Required	Eyes (specify)Respiratory (specify)Gloves(specify)Clothing (specify)Other (specify)	
8. Emergency Response Data		
Precautions	Handling & StorageOthers (specify)	
Fire	Fire Extinguishing MediaSpecial ProceduresUsualHazards	
Exposure(inhalation, skin and eye contact, ingestion)	First Aid Measures	
Spills	Steps to be taken	
Waste Disposal Method		
9. Additional Information		
10. Sources US Ed		
Reference to books, journals, etc.		
11. Manufacture/Supplier Data		
Firm's NameMailing	Address Standard Packing	
Telephone NumberTelex NumberTelegraphic AddressContact person in Emergency	Other_____Other_____Emergency Tel. In transit Areas	

Acronyms and Glossary of terms :

CAS : Chemical Abstract Service Registration Number.

Un Number: United Nation Number.

HAZCHEM Code	:	Emergency Action Code (EAC), allocated by the Joint Committeeof Fire Brigade Operations, UK.

TDG Flammability	:	Transport of Dangerous Goods Flammability Classification byUnited Nations.
NFRA	:	National Fire Protection Association, USA.
LD 50 and LC 50 represent the dose in mg/kg. of body weightand the concentration in mg/1 for 4 hours having lethal effect on50% of the animals (rats) treated.		
PEL	:	Permissible Exposure Limit as laid down in the statutes.
TLV	:	Threshold Limit Value as laid down by the American conferenceof Government Industrial Hygienists. (ACGIH), USA.
STEL	:	Short Term Exposure Limit as laid down in the statues or bythe AGGIH Guidelines:
All efforts should be made to fill in all columns. No columnshould be left blank. In case certain information is notapplicable or available, N/App. or N/AV. sign may be used.		

Schedule 6

[See Rule 5 (1)]Information to be Furnished Regarding Notification of a Major AccidentReport number.....on the particular accident.

1. General date :

(a)Name of the site.(b)Name and address of the occupier (Also state the telephone/telex number)(c)(i)Registration number(ii)Licence number(As may have been allotted under any statute applicable to the site, e.g. the Factories Act).(d)(i)Nature of industrial activity (Mention what is actually manufactured, stored, etc.)(ii)National Industrial Classification 1987 at the four digit level.....

2. Type of major accident:

Explosion.....Fire.....Emission of..... hazardous chemical.

3. Description of the major accident:

(a)Date, shift and hour of the accident.(b)Department/Section and exact place where the accident took place.(c)The process/operation undertaken in the Department/Section where the accident took place (Attach a flow-chart, if necessary)(d)The circumstances of the accident and the hazardous

chemical involved.

4. Emergency measures taken and measures envisaged to be taken to alleviate short-term effects of the accident.

5. Causes of the major accident known (to be specified)/Not known.

Information will be supplied as soon as possible.

6. Nature and extent of damage

(a) within the establishment casualties	.....Killed
	.....Injured
	.....Poisoned
-Persons exposed to the majoraccident	
-Material damage	.....
-Damage in still present	
-Danger no longer exists	.....
(b) Outside the establishment casualties	.....Killed
	.....Injured
	.....Poisoned
-Persons exposed to the majoraccident	.....
-Material damage	.....
-Damage to environment	.....
-Damage is still present	.....
-Danger no longer exists	.....

7. Data available for assessing the effects of the accident on persons and environment.

8. Steps already taken or envisaged.

(a)to alleviate medium or long-term effects of the accident,(b)to prevent recurrence of similar major accident,(c)any other relevant information.

Schedule 7

[See Rule 7(1)]Information to be furnished for the Notification of Activities/Sites. Particulars to be included in a notification of site.

1. The name and address of the occupier making the notification.

2. The full postal address of the site where the notifiable industrial activity will be carried on.

3. The area of the site covered by the notification and of any adjacent site which is required to be taken into account by virtue of Schedule 2(b) and Schedule 3(b).

4. The date on which it is anticipated that the notifiable industrial activity will commence or if it has already commenced a statement to the effect.

5. The name and maximum quantity liable to be on the site of each hazardous chemical for which notification is being made.

6. Organisation structure, namely, organisation diagram for the proposed industrial activity and set up for ensuring safety and health.

7. Information relating to the potential for major accidents, namely:-

(a)Identification of major accident hazards,(b)The condition of events which could be significant in bringing on about,(c)A brief description of the measures taken.

8. Information relating to the site, namely :-

(a)A map of the site and its surrounding area to a scale large enough to show any features that may be significant in the assessment of the hazard or risk associated with the site.(i)Area likely to be affected by the major accident, (ii) population distribution in the vicinity.(b)A scale plan of the site showing the location and quantity of all significant inventories of the hazardous chemicals.(c)A description of the processes or storages involving the hazardous chemicals, the maximum amount of such a hazardous chemical in the given process or storage and an indication of the conditions under which it is normally held.(d)The maximum number of persons likely to be present on site.

9. The arrangement for training of workers and equipments necessary to ensure safety of such workers.

Schedule 8

[See Rule 10(1)]Information to be furnished in a Safety Report

1. The name and address of the person furnishing the information.

2. Description of the industrial activity, namely:-

(a)Site.(b)Construction design.(c)Protection zones (explosion, protection, separation, distances).(d)Accessibility of plant(e)Maximum number of persons working on the site and particularly those of persons exposed to the hazard.

3. Description of the processes, namely:-

(a)Technical purpose of the industrial activity.(b)Basic principles of the technological process.(c)Process and safety-related data for the individual process stage.(d)Process description.(e)Safety-related types of utilities.

4. Description of the hazardous chemicals, namely:-

(a)Chemicals (quantities, substances data on physical and chemical properties, safety-related data on explosive limits, flash-point, chemical stability, toxicological data and threshold limit values, lethal concentrations).(b)The form in which the chemicals may occur or into which they may be transformed in the event of abnormal conditions.(c)The degree of purity of the hazardous chemical.

5. Information on the Preliminary Hazard Analysis, namely:-

(a)Type of accident,(b)System elements or foreseen events that can lead to a major accident,(c)Hazards,(d)Safety relevant components.

6. Description of safety relevant units, among others:-

(a)Special design criteria,(b)Controls and alarms,(c)Pressure relief system,(d)Quick acting values,(e)Collecting tanks/dump tanks,(f)Sprinkler systems,(g)Fire protection.

7. Information on the hazard assessment, namely

(a)Identification of hazards,(b)The causes of major accidents,(c)Assessment of hazards according to their occurrence frequency,(d)Assessment of accident consequences,(e)Safely systems,(f)Known accident history.

8. Description of information on organisational systems used to carry on Industrial activity safety, namely :-

(a)Maintenance and inspection schedules,(b)Guidelines for the training of personnel,(c)Allocation and delegation of responsibility for plant safety,(d)Implementation of safety procedure.

9. Information on assessment of the consequences of major accidents, namely:-

(a)Assessment of the possible release of hazardous chemicals or of energy,(b)Possible dispersion of released chemicals,(c)Assessment of the effects of the releases (size of the affected area, health effects, property damage).

10. Information on the mitigation of major accidents, namely :-

(a)Fire brigade,(b)Alarm system,(c)Emergency plan containing system of organisation used to fight the emergency, the alarm and the communication routes, guidelines for fighting the emergency, examples of possible accident sequences,(d)Co-ordination with the District Collector or the District Emergency Authority and its off-site emergency plan,(e)Notification of the nature and scope of the hazard in the event of an accident,(f)Antidose in the event of a release of a hazardous chemical.Form No. 1Application for Permission to Construct, Extend or Take into use any Building as a Factory.

1. Applicant's-Name :
   Applicant's Calling :
   Applicant's Address :
2. Full Name and Postal Address of factory. :
3. Situation of the factory-
   Province :
   District :
   Town or Village :
   Nearest Police Station :
   Nearest Railway Station or :
   Steamer Ghat :
4. Particulars of 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 this process in its various stages;(b)Plans, in duplicate, drawn to scale, showing-(i)the site of the factory and immediate surroundings including adjacent building and other structures, roads, drain, etc; and(ii)the plan elevation and necessary cross-sections of the various buildings, 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 way; and(c)such other particulars as the Chief Inspector may require.Form No. 2Application for Registration and Grant or Renewal of license for the year....., and Notice of occupation specified in, Sections 6 and 7 to be submitted in triplicate.

1. Full name of the factory with licence number; if already registered from before.

2. (a) Full postal address and situation of the factory.

(b)Full address to which communications relating to the factory should be sent.

3. Nature of manufacturing process/processes-

(a)carried on in the factory during the last 12 months (in the case of factories already in existence);(b)to be carried on in the factory during the next 12 months (in the case of all factories).

4. Names and values of principal products manufactured during the last 12 months.

5. (i) Maximum number of workers proposed to be employed on any one day during the year,

(ii)Maximum number of workers employed on any one day during the last 12 months,(iii)Number of workers ordinarily employed during the last 12 months,(iv)Number of workers proposed to be ordinarily employed during the year for which license is to be obtained.

6. (i) Nature and total amount of power (H. P.) installed or proposed to be installed,

(ii)Maximum power (H. P.) proposed to be used.

7. Full name and residential address of the person who shall be the manager of the factory for the purpose of the Act.

8. Full name and residential address of the occupier-

(i)The proprietor of the factory in case of private firm/proprietary concern,(ii)Directors in the case of a public limited liability Company/firm,(iii)Where a Managing Agent has been appointed the name of Managing Agents and Directors thereof,(iv)Shareholders in the case of a Private Company where no Managing Agents have been appointed,(v)The Chief Administrative Head in case of Govt, or local fund factory.

9. Full name and address of the owner of the premises or building (including the precincts thereof) referred to in Section 93.

10. In case of a factory constructed or extended after the date of commencement of the Bihar Factories Rules, 1950-

(a)Reference number and date of approval of the plans for site whether for old or new building and for construction or extension of factory by the State Government/Chief Inspector.(b)Reference number and date of approval of the agreement, if any, made for the disposal of trade waste and effluents and the name of the authority granting such approval.

11. Amount of fee Rs.....(Rupees.....)....

(i)Paid in Treasury on vide challan no. (enclosed).(ii)Transmitted by Crossed Cheque/Postal Order no.....dated on the bank of the /Post Office, drawn in favour of the Chief Inspector of Factories.Signature of Occupier :Date :Signature of Manager :Date :Note 1.-This form should be completed in ink in block letters or typed.Note 2.-If power is not used at the time of filling up this form, but is introduced later, the fact should be communicated to the Chief Inspector immediately.Note 3.-If any of the persons named against item 8 is minor, the fact should be clearly stated.Note 4.-In the case of a factory, where under the proviso to sub-sections (1) and (2) of Section 100, a person had been nominated as the occupier, information required in item 8, should be supplied only in the respect of that person.Note 5.-In the case of a factory where a Managing Agent or Agents has/have been appointed as occupier(s) under the Indian Companies Act, 1913 (VII of 1913), information required in item 8, should be supplied only in respect of that person or persons.Note 6.-The term "Ordinarily employed" used in item 5 means the number of workers whose names are ordinarily borne on the Register of Attendance or Muster Roll and includes managerial supervisory and such other staff as come within the definition of term "worker".Form No. 3Notice of Change of Manager(See Rule 12-A)

1. Name of factory with licence number.

2. Postal address.

3. Name of outgoing manager.

4. Name of new manager with postal address of his residence and telephone number, if installed.

5. Date of appointment of the new manager.

6. Permanent and home address of the new manager.

DateSignature of new managerSignature of occupierForm No. 4Government of BiharFactory Inspection DepartmentLicense to work in a factoryFees Rs.....Registration No.....Granted/Renewed for the calendar year...Name of factory ...Address and location of

factory ...Name(s) of Occupier(s) of the Factory ...Maximum number of workers to be employedTotal Installed Capacity of Horse PowerIn case of Electric Generating and transforming stations total installed capacity in K.W'sChief Inspector of Factories, Bihar.The.....19.Form No. 5Certificate of Fitness

1.	Serial No...	Serial No... ... ...
	Date	Date... ... ...
2.	Name	I certify that I have personallyexamined (name) ... ... son/daughter of ... ... residing at ... ... who is desirous of beingemployed in a factory, and that his/her age as nearly as can beascertained from my examination, is ... ... years, and thathe/she is fit for employment in factory as an adult/child.His/Her descriptive marks are ... ...
3.	Father's name...	
4.	Sex...	
5.	Residence...	
6.	Date of birth if available and/o certified age...	
7.	Physical fitness	
8.	Descriptive marks...	
9.	Reasons for - (1) refusal of certificate... ... ... (2) certificate being revoked....	
	Thumb Impression.	Thumb Impression.
	Initials of Certifying Surgeon	Certifying Surgeon.

Note.-Exact details of cause of physical disability should be clearly stated.Form No. 6Humidity RegisterDepartment - ... ...Hygrometer. Distinctive mark or number ... ...Position in department ... ...

Date, Year, Month, Day	Reading of Hygrometer.				
Between 7 and 9 a.m.	Between 11 a.m. and 2 p.m. (but not in the restperiod).	Between 4 and 5.30 p.m.	If no humidity insert none.	Remarks	
Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb
1st -2nd -3rd -4th -5th -6th -7th -8th -9th -10th -11th -12th -13th -14th -15th -16th -17th -18th -19th -20th -21st -22nd -23rd -24th -25th -26th -27th -28th -29th -30th -31th -					

(Signed).....Certified that the above entries are correct.(Signed).....Form No. 7Record of Lime-washing, Paintings, etc.

Part of Factory, e.g. name of room.	Paint, lime washed, painted varnished or oiled,e.g., walls, ceilings, wood work etc.	Treatment, whether lime washed painted, varnishedor oiled.	Date on which lime washing, painting, varnishingor oiling was carried out (according to the English calendar)	Remarks	
Day	Month	Year			
1	2	3	4	5	6 7

Signature of ManagerForm No. 8Report of Examination of Pressure Vessel

1.	Name of Occupier of factory	–	
2.	Location and address of Factory	–	
3.	Name, description and distinctive number of Pressure vessel.	–	
4.	Name and address of manufacture	–	
5.	Nature of process in which it is used	–	
6.	Particulars of vessel	–	
	(a)	Year of manufacture	–
	(b)	Date on which the vessel was first taken into use.	–
	(c)	Thickness of walls	–
	(d)	Safe working pressure recommended by the manufacturer.	–
	(e)	History of the vessel in brief.	–
	(f)	Has the examiner seen the last examination and test	–

		report ?
	Was the vessel subjected to hydrostatic test ?	–
	If yes, the pressure applied.	–
7.	Is the vessel is open, or otherwise exposed to weather or todamp ?	–
8.	Details of an examination made and test conducted by theexaminer.	–
9.	What pressure was applied in hydraulic test was conducted bythe examiner?	–
10.	What parts, if any, were inaccessible ?	–
11.	Condition of vessel (State any defects materially affectingthe safe working pressure or the safe working of the vessel)	–
	External	–
	Internal	–
12.	Are fittings and appliances provided in accordance with theRules for Pressure Plants? (Name fittings and appliancesprovided).	–
13.	Are all fittings and appliances properly maintained and ingood condition? If not the defects should be recorded.	–
14.	Repairs, if any required, and the period within which theyshould be executed and any other condition which the personmaking the examination thinks it necessary to specify forsecuring safe working.	–
15.	Safe working pressure, calculate from dimensions and from thethickness and other data ascertained by the present examination,due allowance being made for conditions of working if unusual orexceptionally severe. (State minimum thickness of walls measuredduring the examination).	–
16.	Where repairs affecting the safe working pressure arerequired, state the working pressure	–
	(a)	Before the expiration of the period specified in (15). –
	(b)	After the expiration of such period if the required repairshave not been completed. –
	(c)	After the completion of the required repairs. –
17.	Other observations.	–

I certify that on.....the pressure vessel described above was thoroughly cleaned and (so far its construction permits) made accessible for thorough examination and that on the said date, I thoroughly examined this pressure vessel, 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 of the Company or Association....Form No. 9Register of Compensatory Holidays

Sl. No.	Number in the register of workers	Name	Group or Relay no.	No. and date of exempting order.	Year.
1	2	3	4	5	6

Weekly rest days lost due to the exemption in-	Date of compensatory holidays given in -			Lost rest days carried to the next year.	Remarks.			
January to March	April to June.	July to September.	October to December.	January to March.	April to June.	July to September.	October to December.	
7	8	9	10	11	12	13	14	15 16

Form No. 10Overtime Muster Roll for Exempted WorkersMonth ending.....20

No. in Register	Name	Department	Dates on which overtime has been worked	Extent of overtime on each occasion	Total overtime worked or production in casesplace workers	Normal hours
1	2	3	4	5	6	7

Normal rate of pay	Overtime rate of pay	Normal earning.	Overtime earning.	Cash equivalent of advantage accruing through theconcessional sale of foodgrains and other articles.	Total earnings.	Date on which overtime payment made.
8	9	10	11	12	13	14

N.B.- Columns between overtime earning and total earnings, added by Notification No. 11/FI-1075/58 11988, dated 15.7.1958.Form No. 10-AOvertime Slip

1. Name of the workers.

2. Token no. or the no. in the register of adult workers.

3. Designation or nature of employment.

4. Department.

5. Work for which overtime work was done.

6. Normal hours of work (as notified in the notice of period of work)-

From to

7. Period of overtime.-

From to

8. Such additional details as may be necessary for workers whose wages is piece rate or is a combination of time and piece rate (incentive wages).

Manager/Designation of the person, if signed by a responsible person if not signed by the Manager.Form No. 11Notice of Periods of Work for Adult Workers.Name of Factory.. Place.............................District

Period of work.			Men	
Groups			Total number of men employed.	
A			B	C D E
Relays			1	2 3 1 2 3 1 2 3 1 2 3 1 2 3
On working daysFrom -To -From -To -From -To -On partial working days From -To -From -To -				
Women	Description of groups			
Total number of women employed.	Nature of work	Group of letters	Remarks	
F	G	H	I	J
1	2	3	1	2 3 1 2 3 1 2 3 1 2 3
				ABCDEFGHIJ

Date on which this notice first exhibited 2000 (Signed) on Manager

Form No. 12Register of Adult Workers

Serial No.	Name and address.	Father's name.	Nature of work.	Letter of group as in Form No. 11	Number of relay, if working in shifts.	No. and date of certificate if an adolescent.	Remarks.
No. of certificate	Token number giving						

and date.	reference to the certificate.							
1	2	3	4	5	6	7	8	9

[Form No. 12 A] [Inserted by S.O. 764 dated 18.6.1986.](See Rule 80-A)Identity Card of Workers

1. Name and address of the Factory. {|

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|-| 2.| Name (with Token no.) and address of the worker.|-| 3.| Father's name.|-| 4.| Date of joining in the factory.|-| 5.| Age (Date of birth) of workers.|-| 6.| Mark of identification.|-| 7.| Designation or nature of work.|-| 8.| Blood group of the worker.| Signature of Occupier/Manager|-|| Signature of the worker.Date| Date (with seal)|}Form No. 13Notice of Periods of work for Child WorkersName of Factory ... ... Place ... ...District ... ...

Periods of work.		Children		Description of group.		Remarks.	
Total number of children employed.							
Groups.		A	B	C	Group letter	Nature of work	
Relay		1	2	1	2	1	2
From	To						ABC

Date on which this notice is first exhibited.....20(Signed)ManagerForm No. 14Register of Child Workers

Serial No.	Name and address	Father's name.	Date of first employment.	No. of certificate and its date.	Token number giving reference to certificate.	Letter of groups as in Form 13.	No. of relay, if working in shifts.	Date of birth or age as certified by theCertifying Surgeon.	The nature of his work.	Remarks.
1	2	3	4	5	6	7	8	9	10	11

Form No. 15Register of Leave with wagesName of Factory .....

Serial No.	Date of entry into Service-	
Department-	Date of discharge-	
Name -	Adult/Child	Leave at his credit-
Father's name-	Earned in the preceding calendar year-	
Serial no. in the Register of Adult/child workers-	Earned during the current year-	
Wage period from ..... to	Wages paid in lieu of leave.	

Amount-

Date-

Calendar year in which leave is to be availed.	Wage period from..... to.....	Wage earned during the wage period	No. of days worked during the preceding Calendaryear.	Leave to credit.					
No. of days of works performed.	No. of days of lay off.	No. of days of maternity leave.	No. of days if leave u/s 79 enjoyed.	Total of Columns 5 to 7.	Balance of leave carried forward from previousyear.	Leave earned during the year preceding the yearmentioned in column 1.			
1	2	3	4	5	6	7	8	9	10

Leave to credit.									
Total of columns 9 & 10.	Whether leave in accordance with Scheme underSection 79 (8) was refused Reference and date.	Leave enjoyed	Balance of leave to credit at the end of theyear.	Normal rate of wages.	Cash equivalent of advantage accruing throughconcessional sale or foodgrains and other articles.	Rate of wages for the leave (Period (Total ofCols. 16 & 17)	Wages paid for the leave period with date.	Remarks	
From -	To								
11	12	13	14	15	16	17	18	19	20

Form No. 16Health Register(In respect of persons employed in occupations declared to be dangerous operations under Section 87)Name of Certifying Surgeon :

Name of Certifying Surgeon :

(a) Mr. ..... From..... To....

(b) Mr. ..... From..... To....

(c) Mr. ..... From..... To....

Serial No.	Works No.	Name of workers.	Sex.	Age (last birthday).	Date of employment on present work.	Date of leaving or transfer to other work.	Reason of leaving or transfer or discharge.	Nature of job occupation.

1	2	3	4	5	6	7	8	9
Raw material or by-products handled.		Date of medical examination by Certifying Surgeon			If suspended from works, state period ofsuspension with detailed reasons.	Re-certified fit to resume duty on (withsignature of Certifying Surgeon).	If Certificate of unfitness or suspension issuedto worker.	Signature, with date, of Certifying Surgeon.
Result of Medial Examination.								
10		11			12	13	14	15

Note.-(i) Column 8 : detailed summary of reason for transfer or discharge should be stated.(ii)Column 11 : should be expressed as fit/unfit/suspended.Form No. 17ANotice of Accident or dangerous occurrence(To be sent forthwith to the Inspector of Factories)(See instructions on reverse)

1. Name of Occupier (or Factory).

2. Address of Works where accident or dangerous occurrence happened.

3. Nature of Industry.

4. Branch or Department and exact place where the accident or dangerous occurrence happened.

5. Injured person's name and address.

6. (a) Sex, (b) Age (last birthday) and (a).....(b).....(c).....Occupation of injured person.

7. Date and hour of accident or dangerous occurrence.

8. Hour at which he started work on day of accident.

9. (a) Cause or nature of accident or (a) dangerous occurrence.

(b)If caused by machinery-(i)Give name of the machine and part causing the accident, and (b) (i)(ii)State whether it was moved by mechanical power at the time. (b) (ii)(c)State exactly what

injured person was doing at the time. (c)

10. Nature and extent of injuries (e.g., total loss of finger, fracture of leg, scalp, scratch followed by sepsis).

11. If accident is not fatal, state whether injured person was disable for 48 hours or more.

12. Name of Medical Officer in attendance on injured person.

I certify that to the best of my knowledge and belief the above particulars are correct in every respect.Signature of Occupier or Manager.....Note.-To be completed in legible hand-writing or preferably typewritten. This space to be completed by Inspector of Factories.District .....Date of Receipt.....Accident no.....Industry no.....Causation no.....Sex. (M., W., B or G :) ... .Other particulars (e.g., fatal, leg injury, arm injury, etc.).Date of Investigation.....Result of Investigation.....Notification of AccidentsExtract from the Factories Act, 1948 (Section 88)Where in any factory an accident occurs which causes death or which causes any bodily injury by reason of which the person injured is prevented from working for a period of forty-eight hours or more, immediately following the accident, or which is of such nature as may be prescribed in this behalf, the manager of the factory shall send notice thereof to such authorities, and in such form and within such time, as may be prescribed.Extract from the Bihar Factories Rules, 1950 (Rule 96)When any accident specified in the Schedule takes place in a factory, the manager of the factory shall forthwith send notice thereof by telephone, special messenger or telegram to the Inspector and if the accident is fatal or of such a serious nature that it is likely to prove fatal, notice as aforesaid shall also be sent to:-(a)the District Magistrate or Subdivisional Officer,(b)the Officer-in-charge of the nearest police station, and(c)the nearest relative of the injured or deceased person.(2)The notice so given shall be confirmed by the Manager of the factory to the abovementioned authorities within 12 hours of the occurrence by sending to them a written report in the prescribed Form No. 17-A.

Schedule 44

1. Accidents which cause-

(a)death to any person;(b)such bodily injury as prevents or will probably prevent the person injured from working for a period of 48 hours immediately following the accident.Such injury as may not prevent the injured person from working immediately after the accident, but as may develop subsequently into an injury due to any infection or due to any other reason which may prevent the injured person from working for not less than 48 hours during any period after the accident.

2. The following classes of accidents, whether or not they are attended by personal injury or disablement:-

(a)Bursting of a boiler or vessel used for containing steam under pressure greater than atmospheric pressure;(b)Collapse or failure of a crane, derrick, winch, hoist or other appliances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane.(c)Explosion of fire causing damage to any room or place in which persons are employed.(d)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.(e)Collapse or subsidence of any floor, gallery, roof bridge, tunnel, chimney, wall or building forming part of a factory or within the compound or curtilage of factory.(f)Bursting of fly wheels, of griding machinery or any other part of a revolving machinery.Form No. 17-BSupplementary notice of accident

1. Name of the factory and location-

2. Name of the injured person-

3. Date of accident-

4. Reference of the first notice of accident in Form No. 17A.

5. Date on which the worker returned to work.

6. Man days lost due to the accident-

Signature of the Manager or OccupierForm No. 18(See Rule 97)Notice of poisoning or disease

1. Name of factory.....

2. Address and location of factory

3. Name of worker affected by poisoning or disease.

4. Sex.....Age.....

5. Serial number of the worker in the register of adult/child workers.

6. Permanent or home address of the worker.

7. Department and process or operation on which the worker was normally employed.

8. Department, process or operation on which the worker was employed at the time when the poisoning or disease was detected or reported.

9. Nature of poisoning/disease.....

10. Date on which the poisoning/disease was detected/reported.

11. Was the poisoning/disease detected or reported by the Certifying Surgeon.

Date-Copy to-The Chief Inspector of Factories,The Inspector of Factories,The Medical Inspector of Factories,The certifying Surgeon.To be filled by the Chief Inspector/Inspector/Medical Inspector.Serial no. of case.....Remarks.....(Reverse)Notice of Poisoning or DiseaseExtract from the Factories Act, 1948 (Section 89)Where any worker in a factory contracts any disease specified in the third Schedule, the Manager of the factory shall send notice thereof to such authorities, and in such form and within such time, as may be prescribedExtract from the Bihar Factories Rules, 1950(Rule 97)A notice in Form No. 18 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 aliphatic series, or of chrome ulceration, anthrax, silicosis, toxic ansemia. toxic jaundice, primary opitheliomatious cancer of skin, or pathological manifestations due to radium or other radioactive substances or X-rays.Form No. 19Abstract of the Factories Act, 1948, and the Bihar Factories Rules, 1950(To be affixed in a conspicuous and convenient place at or near the main entrance to the factory)Interpretation"Worker" means a person employed directly or through any agency whether for wages or not in any manufacturing process, or in cleaning any part of the machinery or premises used for a manufacturing process, or in any other kind of work incidental to. or connected with, the manufacturing process, or the subject of the manufacturing process.Working Hours, Holidays, Intervals for 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 64-The ordinary limits in working hours of adults may be relaxed in certain special cases, e.g.. workers engaged on urgent repairs in preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working for the factory, in work which is necessarily so intermittent that the intervals during which they do not work while on duty ordinarily amount to more than the intervals for rest: in work which for technical

reasons must be carried on continuously throughout the day; in making or supplying articles of prime necessity which must be made or supplied every day: in a manufacturing process which cannot be carried on except during fixed seasons, or at times dependant on the irregular action of natural forces; in engine rooms or boiler houses or in attending to power plant or transmission machinery in the printing of newspaper which are held up on account of the break down of machinery in the loading and unloading of the railway wagons, and when a worker is not relieved at the end of the period of his work owing to the failure of reliever to come at the appointed hour.

Except in case of urgent repairs and a reliever not turn up in time the relaxation shall not exceed the following limits:-(i)the total number of hours of work in any day shall not exceed ten;(ii)the total number of hours of overtime work shall not exceed 50 for any one quarter;(iii)the spread-over inclusive of intervals for rest shall not exceed 12 hours in any one day.In the case of any or all adult workers in any factory, the ordinary limits on working hours of adults may be relaxed for a period or periods not exceeding in the aggregate 3 months in any year, to enable the factory to deal with an exceptional pressure of work, subject to the above noted conditions.

3. Payment of Overtime-Section 59.-Where a worker works in a factory for more than 9 hours in any day or for more than 48 hours in any week he shall, in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate of wages.

Ordinary rate of wages means the basic wages plus such allowances including the cash equivalent of the advantage accruing through the concessional sale to worker, of foodgrains and other articles but does not include a bonus.

4. Weekly Holidays (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 on the day which is to be substituted and displayed a notice to that effect in the factory:

Provided that so 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 provisions relating to weekly holidays, is deprived of any of the 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 (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 had an interval for rest of at least half an hour and that inclusive of his intervals for rest they shall not spread-over more than 10 1/2 hours in any day, or with the permission of the Chief Inspector in writing, 12 hours.

6. Prohibition of Double Employment-Sections 60, 71 and 99.-No child or, except in certain circumstances an 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 and between the hours of 7 P.M. and 6 A.M. The periods of work of all children employed in a factory shall be limited to two shifts which shall not overlap or spread over more than 5 hours each and each child shall be employed in only one of the relays.

The provision relating to weekly holidays shall also apply to child workers and no exemption from this provision may be granted in respect of any child.

9. Prohibition of Employment of Women-Section 66-No woman shall in, any circumstances be employed in any factory for more than 9 hours on any day or between hours of 7 P.M. and 6 A.M. They may be allowed to work upto 10 P.M. in special circumstances.

The change of shift of a woman worker shall take place only after a holiday.Leave With Wages.

10. Leave with Wages-Sections 79, 80 and 83 and Rules-(1) 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 15 days of work performed by him during the previous calendar year;Provided that a period of leave shall be exclusive of all holidays which may occur during such or at either end of the period of leave.(2)A worker, whose service commences otherwise than on the first day of January, shall be entitled to leave with wages at the rate laid down in clause (i) or, as the case may be, clause (ii) of sub-section (1); if he has worked for two-third of the total number of days in the remainder of the calendar year.(3)If a worker is discharged or dismissed from service during the course of the year he shall be entitled to wages in lieu of the leave earned till that date at the rates specified above even if he has not worked for 240 days in that year. If a worker entitled to leave with wages is discharged from the factory before he has taken the entire leave to which he is entitled, or if having applied for and having not been granted such leave, he 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 shall be made before the expiry of the second working day after the day on which his employment is terminatedThe manager shall maintain a leave with wages register in the prescribed Form no. 15 and shall provide each worker with a book called the 'Leave Book' in the prescribed Form No. 15. The Leave Book shall be the property of the worker and the manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service 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 another copy of payment of six paise and shall complete it from his record.Health

11. Cleanliness-Section 11-Except in cases specially exempted all inside walls and partitions, all ceilings or tops of rooms and wall sides and tops of passages and staircases in a factory shall be kept white-washed or colour-washed. The white-washing or colour-washing shall be carried out at least once in every period of fourteen months. The floors of every workroom shall be cleaned at least once in every week by washing, using disinfectant, where necessary, or some other method.

12. Disposal of Wastes and Effluents-Section 12 - Effective arrangements shall be made in every factory for the disposal of wastes and effluents due to the manufacturing process carried on therein.

13. Ventilation and Temperature-Section 13-Effective and suitable provisions shall be made in every factory for securing and maintaining in every workroom adequate ventilation by the circulation of fresh air and such a temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health.

14. Overcrowding-Section 16 - Unless exemption has been granted there shall be in every workroom of a factory in existence on 1st April, 1949 at least 350 cubic feet and of a factory built after this date at least 500 cubic feet of space for every worker employed therein and for this purpose no account shall be taken of any space which is more than 14 feet above the level of the floor of the room.

15. Lighting-Section 17 - In every part of a factory where workers are working or passing, there shall be provided and maintained sufficient and suitable lighting, natural or artificial or both.

16. 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 ice or other effective methods. The cooled drinking water shall be supplied in every canteen, lunchroom and rest room and also at conveniently accessible points throughout the factory

17. 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. Every latrine shall be under cover and so partitioned off as to secure privacy and shall have proper door and fastenings. Sweepers shall be employed whose primary duty it would be to keep clean latrines, urinals and washing places.

In every factory, wherein more than 250 workers are ordinarily employed, all latrines and urinals accommodation shall be of prescribed sanitary type.

18. 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 within the premises of a factory 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

19. Fencing of Machinery-Section 21-In every factory dangerous parts of machines, e.g., every moving part of a prime-mover and every flywheel connected to a prime-mover, etc, etc, 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.

20. Work on or near Machinery in motion-Section 22- No woman or child shall be allowed in any factory to clean, lubricate or adjust any part of the machinery while that part is in motion, or to work between moving parts, or between fixed and moving parts of any machinery which is in motion.

21. 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 danger 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 a person who has a thorough knowledge and experience of the machine.

22. 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.

23. Excessive Weights-Section 34- No woman or young person shall be unaided by another person to lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the following limits:-

Adolescent male	... 65 lbs.
Adolescent female	... 45 lbs.
Male child	... 35 lbs.

Female child ... 30 lbs.

24. Protection of Eyes-Section 35- Effective screens or suitable goggles shall be provided for the protection of person employed in or in the vicinity of processes which involve risk or injury to the eyes from particles or fragments thrown off in the course of the process which involves risk or injury to the eyes by reason of exposure to excessive light.

25. 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.

26. First-Aid 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. The number of first-aid boxes shall not be less than one for every 150 workers ordinarily employed.

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 equipments. The ambulance room shall be in charge of a qualified medical practitioner assisted by atleast one qualified nurse and such other staff as may be prescribed.

27. Canteen-Section 46 and Rules-In specified factories 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 prices charged shall be subject to the approval of a Canteen Managing Committee which shall be appointed by the Manager and shall consist of an equal number of persons nominated by the occupier and elected by the workers, the number of elected workers shall be in the proportion of 1 for every 1000 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. Shelters, 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 woman workers are ordinarily employed there shall be provided and maintained a suitable room or rooms for the use of children under the age of six years of such women. The creches 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 older children.

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 towels 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 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 suitable, fenced and shady open air playground shall also be provided for the older children.

30. No charge for Facilities and Conveniences-Section 114-No fee or charge shall be realised from any worker in respect of any arrangements or facilities to be provided or any equipments or appliances to be supplied by the occupier under the provisions of the Act.

31. 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 purposes of securing the health, safety or welfare of the workers therein;(ii)shall wilfully and without any reasonable cause do any thing 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 or 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 provision of the Act or any rule or orders made thereunder imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 20.

32. A notice of periods of work for adults and a notice of periods of work for children in the prescribed Form Nos. 11 and 13 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 No. 20] [Substituted by S.O. 686 dated 10.7.1988.][Prescribed under Rule 100(1)]Annual Return for year ending 31st December, 20.....

1. Registration number of factory ...

2. Name of factory ...

3. Name of 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. No. of days worked in the year.

9. No. of man-days worked during the year-

(a)Men(b)Women(c)Children

10. Average number of workers employed daily (see explanatory note):-

(a)Adults-(i)Men(ii)Women(b)Adolescent-(i)Male(ii)Female(c)Children-(i)Male(ii)Female

11. Total no. of man-hours worked including overtime:-

(a)Men(b)Women(c)Children

12. Average number of hours worked per week (see explanatory note)-

(a)Men(b)Women(c)Children

13. (a) Does the factory carry out any process or operations declared as dangerous under Section 87 (see Rule 95)?

(b)If so give the following information-(i)Name of the dangerous process or operations carried on-(ii)Average no. of persons employed daily in each of the processes or operations given in col. 1.(iii)etc. Leave with Wages.

14. Total number of workers employed during the year.....

(a)Men(b)Women(c)Children

15. Number of workers who were entitled to annual leave with wages during the year-

(a)Men(b)Women(c)Children

16. Number of workers who were granted leave during the year-

(a)Men(b)Women(c)Children

17. (a) Number of workers who were discharged or dismissed from the service, or quit employment or were superannuated, or 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 rule notified under Section 40-B.

(b)Number of Safety Officers already appointed.Ambulance room

19. Is there an ambulance room provided in the factory as required under Section 45?

Canteen

20. (a) Is there a canteen provided in the factory as required under Section 46?

(b)Is the canteen provided managed-(i)departmentally, or(ii)through a contractor?Shelters or Rest Rooms and Lunch Rooms.

21. (a) Are there adequate and suitable shelters or rest rooms provided in the factory as required under Section 47?

(b)Are there adequate and suitable lunch rooms provided in the factory as required under Section 47? Creches

22. Is there a creche provided in the factory as required under Section 48?

23. (a) Number of Welfare Officers to be appointed as required by rule notified under section 49.

(b)Number of Welfare Officers appointed.

24. (a) Total number of accidents (see explanatory note)-

(i)Fatal(ii)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 worker returned to work during the same year-(a)Number of accidents,(b)Man-days lost due to accident.(ii)Accidents (workers injured) occurring in the previous year in which injured workers returned to work during the year to which this return relates-(aa)Number of accidents..(bb)Mandays lost due to accidents.(c)Accidents (workers injured) occurring during the year in which injured workers did not return to work during the year to which the return relates-(i)Number of accidents ...(ii)Man-days lost due to accidents.Certified that the information furnished above is to the best of my knowledge and belief, correct.Date.....Signature of the Manager.Explanation-(1) The average number of workers employed daily should be calculated by dividing the aggregate number of attendance on working days (that is, man-days 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 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,

partial attendance for less than half a shift on. a working day should be ignored, while attendance for halt a shift or more on such days should be treated as full attendance(2)For seasonal factories, the average number of workers employed during the working seasons and the off seasons should be given separately. Similarly the number of days worked and average number of man-hours 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 total number of workers employed in the factory during the year and 52. In case the factory has not worked for the whole year the number of week 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(c), the number of accidents which took place during the year should be given. In case of non-fatal accidents only those accidents which prevented workers from working for 48 hours or more should be indicated.Form No. 21Half yearly returnPeriod ending 30th June 20...../31st December, 20...Name of FactoryName of OccupierName of Manager ...(1)District(2)Postal Address(3)Nature of Industry*(4) Average number of workers employed daily-MenWomenAdolescentsMaleFemaleChildrenMaleFemale(5)Number of days worked during the year ending 30th June, 20.....Certified that the information furnished above is to the best of my knowledge and belief, correct.Signature of Manager.Form No. 22Muster RollName of Factory..... Place.....district.

Serial no.	Name	Father's name	Nature of work	For the period ending	Remarks
1	2	3	4	5	6

* 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 by temporary as well as permanent employees should be counted, and all employees should be included, whether they are employed directly or under contractors. Attendances 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 process were not carried on should not be treated as working days.[Form No. 23] [Substituted by S.O. 1580, dated 6.12.1975.]Register of Accidents

Serials no. of accidents	Date and time of accident	Name of persons injured and killed	Name & nature of accident	Date of reporting (in Form No. 17) to Inspector.	Date of return of injured person.	No. of days injured person work due to theaccident.	Signature of the Manager or any person dulyauthorised in writing by the Manager.
Injured	Killed	Place	Brief Description.				

1	2	3	4	5	6	7	8	9	10

Provided further that in case of an accident as specified in sub-clause (c) of clause (i) of the schedule attached to Rule 96, the details of the accident may be entered in the register within 12 hours of the time when the fact that the injury was likely to prevent the injured person from working for not less than 48 hours comes to the notice of the manager or of the person under whom the said person was employed.Form No. 24Special Certificate of Fitness(In respect of persons employed in operations involving use of lead compounds)Serial no. ... ...Date ... ...I hereby certify that I have personally examined.....son of.....residing at.....who is desirous of being employed as.....and that his/her age as nearly as can be ascertained from my examination, is.....years, and that he/she is in my opinion, fit for employment at work involving the use of lead compounds. His/her descriptive marks are:-

.....

L.T.I. of person examined.

I certify that I examined the person mentioned above on.....	I extend this certificate until...	Signature of Certifying Surgeon.	Note of symptom of Lead poisoning if any.

Form No. 25Certificate of Fitness for Dangerous Operations(Rule 96)

1. Serial Number.2. Name of person examined.3. Father's name.4. Sex.5. Address.6. Name of the factory in whichemployed/in which wishes to be employed.7. Process of department in whichemployed/wishes to be employed.8. Whether certificate granted.9. Whether declared unfit andcertificate refused.10. Reference number of previouscertificate granted or refused.L.T.I. of persons examined.Signature of Certifying Surgeon.	Serial NumberI certify that I have personallyexamined..... (Name) son of..... (Father'sname) residing at..... (address) who is desirable ofbeing employed as..... (Name of factory)in..... (Dept. & Process),..... that asnearly as can be ascertained from by examination, he is fit/unfitfor employment at the above noted factory.2. He is fit to be employed and maybe employed on some other non hazardous operation such as.....3. He may be produced for furtherexamination after a period of...4. He is advised following furtherexaminations.....5. He is advised followingtreatment.6. The serial number of theprevious certificate is.....L.T.I. of the person examined.Signature of Certifying Surgeon.Note. - 1. The counterfoil shouldbe retained by the Certifying Surgeon and maintained in a boundbook or in a file.2. The para which does not applymay be cancelled.

Form No. 26Register of Surgeon's Fees for the Issue of Duplicate CertificatesPaid into Treasury at.....on (date).....Signature of Certifying Surgeon

Date	Serial no.	Number of previous certificate.	Name of person to whom granted.	Initial of Certifying Surgeon.
1	2	3	4	5

Form No. 27Certifying Surgeon's Visit NoteVisit to (Factory) on (date) 20Name of Certifying SurgeonExamination and Certificates(A)Children-

1. Original examination.....Number examined ... Number granted certificates..

2. Examination of those holding provisional certificates....Number examined Number granted certificates.....Number of impounded provisional certificates....

3. Re-examination of those holding certificates.....Number-examined Number of certificates cancelled.....Reason for cancellation in each case (i.e., general nature of unfitness)

(B)Adolescents-

1. Original examination....Number examined Number granted certificates.....

2. Examination of those holding provisional certificates...Number examined Number granted certificates....Number of impounded provisional certificates.....

3. Re-examination of those holding certificates....Number examined Number of certificates cancelled....Reason for cancellation in each case (i.e., general nature of unfitness)...

Signed Certifying SurgeonForm No. 28Diary of Inspector of FactoriesFor the week ending Saturday, the ..... 20 .....

Date	Factories visited or other work done (if visitedfor a special purposes, state what.)	Defects found and order issued. Remarks
Sunday ...		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

Saturday

Reverse Side of Form No. 28

Analysis of visits, etc.	Under the Act at time of first visit.	Not under the Act at time of first visit.	Found closed.	Remarks
Factories visited, etc.				
" " twice ...				
" " thrice...				
" " more than thrice.				
Time (etc.) of visit...	Factories...	Visits ...		
During legal working hours.				
During rest intervals ...				
Before or after legal working hours.				
On Sundays or holidays.				
For enquiring into accidents.				
For special purpose ...				
Total...				
Number of factories visited (all classes).				
Number of visits paid (all classes).				
The prosecution against occupied....days				
Prosecutions... Other work, if any days....				

Signature....Inspector of FactoriesDate....Form No. 29Closure Report of Factory

Name of the Factory	... ...
Registration number of Factory	... ...
Name of Occupier	... ...
Name of Manager	... ...
Postal Address	... ...

Name of section or department which has closed.If the whole factory has closed please write "Total closure"	Date of closure.	Reason of closure.	Number of workers on the register of factory orpart of the factory which is closed on the date of closure.	Number of workers affected by the closure.	Probable period of closure.	Remarks
1	2	3	4	5	6	7

Form No. 30(See Rule 57-A)Register of Water-sealed Gas-holder

1. Name and address of Factory ... ...
2. Distinguishing number of the gas-holder ... ...
3. Location and department ... ...
4. Type of gas-holder ... ...
5. Fuel used ... ...
6. Name and address of manufacturer ... ...
7. Date of manufacture ... ...
8. Capacity in cu. metres/cu. ft ... ...
9. Number of lifts ... ...
10. Pressure thrown by holder when full of gas ... ...

Serial no.	Date of examination carried on under sub-rules(4) and (5).	Name, qualifications, designation of examiningperson.	Method and details of examination carried out.	Remarks and observations of the examining person.	Signature of the examining person.	Signature of the Manager or Occupier.	Details wi dates of painting overhaulir otherrouti maintenar work carri out.
Particulars and description.	Name, qualification and designation of the personcarrying out the repairs.						
1	2	3	4	5	6	7	8

Note.-Separate page will be allotted to each gas-holder.Form No. 31(See Rule 57-A)Report of examination of Water sealed Gas-holder

Part I – 1. Name and address of the factory.

2. Department where the gas-holder is located.

3. Details of the Gas-holder -

(a)Distinguishing number of the gas-holder.(b)Type and description of the gas-holder.(c)Name and address of the manufacturer.(d)Date of manufacture.(e)Other details, if any.

4. Particulars of gas to be stored in holder.

5. Particulars of the condition of the following as observed at the time of examination:-

(a)Cown.(b)Side sheeting, including grips and cups.(c)Guiding mechanism, (Roller carriages, rollers,, pins, guide rails and ropes).(d)Tank.(e)Other structure, if any, including columns, farming and bracing,(f)Any other observation.

6. Particulars of the position of the lift as observed at the time of examination.

7. Were the tank and lifts found sufficiently level for safe working ? If not, the steps necessary to remedy the defects.

8. Fittings and appliances-

(a)Are all fittings and appliances properly maintained and in a good condition ?(b)Repairs if any, required.(c)The period within which the repairs must be carried out.

9. Any other condition or measure that the examining person may consider necessary for safe working of the gas-holder.

10. Is the gas-holder in such a condition as not to be considered safe to be kept in operation ?

11. Other remarks and observations.

12. Date of Examination.

I certify that on the gas-holder described above was thoroughly examined and such of the tests as were necessary made on the same day and that the above is a true report of my examination.Signature of the Examiner.(Full name ,.....)Date.....Qualifications.....Address.....Signature of Manager or Occupier.

Part II – Detail of the repairs carried out or other steps or measure taken to remove the defects and to comply with the suggestions, recommendations and observations made by the examining person with dates.

Details. Dates.

(1)

(2)

(3)

Signature of Manager or OccupierForm No. 32Register of trained adult male workers employed to carry out mounting or shifting of Belts, Lubrications, etc.[Section 22 (1) and Rule 59-A]

1. Name of the factory, location and address.....

2. Registration number..

Sl. no.	Name of the worker.	Serial no. in register of adult workers (formno....) and ticket number if any.	Department in which employed.	Work on which employed. Details of training.	Signature of Manager.	Remarks.
1	2	3	4	5	6	7

Form No. 33Certificate to young persons considered fit to work at Machine, Plant or Process of dangerous character

1. Serial number...

2. Name of the factory and location ...

3. Registration number of factory ...

4. Name of the young persons ...

5. Serial number in the register of adult worker (form no.) or register of child workers (form no.)

6. Number and reference of the certificate of fitness granted by the Certifying Surgeon

7. Department and machine, plant and process on which the young person is to be employed.

(Certified that the young persons mentioned above have been fully instructed by me as to the dangers arising in connection with the Machine/Plant/Process mentioned above and as to the precautions to be observed and has received sufficient training in work on the

Machine/Plant/Process and that in my opinion he is fit to be employed on the said Machine/Plant/Process.

2. He is fit to be employed under the adequate and direct supervision of.....

Signature of the Manager.Signature of the Certifying Officer.Full name and designation.[Form No. 34] [Inserted by S.6. 686 dated 13.7.1988.](See Rule 3-A)Form of Certificate of Stability

1. Name of the factory.-.....

2. Village, town and district in which the factory is situated.....

3. Full postal address of the factory.....

4. Name of the occupier of the factory.....

5. Nature of manufacturing process to be carried on in the factory.....

6. Number of floors on which workers will be employed.

I certify that I have inspected the building/buildings, the plans of which have been approved by the Chief Inspector in his letter no.... dated. .. and examined the various parts including the foundations with special reference to the machinery, plant, e.t.c., that have been installed. I am of the opinion that the building/buildings which has/have been constructed/reconstructed/extended/taken into use is/are in accordance with the plans approved by the Chief Inspector in his letter mentioned above, that is/they are structurally sound and that its/their stability will not be endangered by its/their use as a factory/part of factory for the manufacture of for which the machinery, plant, etc , is intended.Signature.....Qualification .....Address .....Date.....If employed by a Company or Association, name and address of the Company or Association;The certificate of stability shall be signed by a "competent person" as defined below:-"Competent person" means a person holding any of the qualifications exempting him from passing Parts A and B of the Associate Membership Examination of the Institution of Engineers (India) whom the Chief Inspector considers competent for any specified purpose by virtue of his experience.[Form No. 35] [Inserted by S.6. 686 dated 13.7.1988.][See sub-rule (4) of Rule 59-C]Record of Eye Examination

Sl. no.	Deptt/works	Name of Worker	Sex	Age (on last birth day).				
1	2	3	4	5				
Occupation		Examination of eye sight		Signature of Opthalmologist		Remarks		
Nature of work		Date of Employment		Date		Result		
6		7		8		9	10	11

A

(Rule-5)Fee payable for original licence and for Annual Renewal of licences for Factories and defined in Section 2(m) of the Factories Act, 1948Other than Electricity Generating, Transforming or Transmitting Factories

Sl. no.	Total rated Capacity (Power) of the machineriesand plants Installed expressed in HORSE POWER.	Maximum number of persons proposed to beemployed on any one day during the year for which licence is tobe taken.											
		20	50	100	250	500	750	1,000	2,000	5,000	10,000	25,000	Over 250,0
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	Nil...		100	390	450	550	750	1000	1500	1750	2000	2250	2450
2.	Not Exceeding	10	225	400	550	750	1150	2000	2500	3000	4500	9500	1000
3.	Ditto	50	450	650	750	1050	1650	2150	3100	3500	5000	10000	1200
4.	Ditto	100	650	1000	1500	2150	2500	4000	4500	5500	6500	8000	1500
5.	Ditto	250	1000	1500	2150	2500	4000	4500	5500	6500	8000	15750	2525
6.	Ditto	500	3600	4500	4750	5000	5500	7030	8290	9375	16875	21105	3289
7.	Ditto	1000	4500	4750	5000	6150	7125	8340	9375	11715	18340	22500	3609
8.	Ditto	2000	4750	5000	6150	8350	9375	11875	12550	13550	19690	23965	3780
9.	Ditto	5000	6150	8350	9000	9550	10000	12550	13550	14075	22500	22775	4100
10.	Ditto	10000	9000	9500	10000	12550	13550	14075	22500	25775	30500	41000	4565
11.	Ditto	25000	13560	14075	22500	25775	30500	41000	45650	50550	55000	60500	8000
12.	Over	25000	14075	25775	30500	41000	45650	50550	55000	65500	80000	84500	8500

"B"

Scale of fees payable for Licence and Annual Renewal of Licence by all Electricity Generating, Transforming and Transmitting station (Factories).(a)Generating and Transforming stations (Factories):-

	Total installed Generating Capacity in K.W.	Generating Station.	Transforming (including Conversion Station)
	K.W.	Rs.	Rs.
Not exceeding	50	250	150
Ditto	100	450	250
Ditto	150	650	450
Ditto	300	750	700
Ditto	500	1000	750
Ditto	750	1500	1125
Ditto	1000	2000	1500
Ditto	2500	3500	2150
Ditto	5000	4500	2500
Ditto	10000	5500	3000
Ditto	25000	7500	4500
Ditto	50000	12000	6000
Ditto	75000	15000	7500
Ditto	100000	19500	9000
Ditto	150000	24000	12000
Ditto	200000	30000	18000
Ditto	300000	39000	24000
Over	300000	48000	30000

(b)All transmitting Stations (Factories) - Rs. 4,500.00Explanations.-(1) Total rated Capacity(power) of machinery of plants means:-(a)In case of machinery of plants which generates or provides power, the rated generating or producing capacity (power) expressed in Horse Power.(b)In case of any prime-mover the raised capacity expressed in Horse Power.(c)In case of any other plant or machinery the power expressed in Horse Power required K.W. to operate the machine at its normal rated capacities.(d)In case of electric furnaces, ovens or like plants, the consumption thereof for its rated or a normal operation converted in terms of Horse Power.(e)In case of furnaces, ovens, and like plants fired by coal, oil, gas or any other fuel the equivalent electric power converted into Horse Power.(f)In case of Steam Boilers and Steam Generators, the rated capacity of the Boiler expressed in terms of Horse Power.For the Boiler used for supply of process steam evaporation capacity of 34.5 lbs. of water per hour would be taken as equivalent to Horse Power.

2. Where a factory has its own electric power generating plants to the amount of fees payable for the whole factory shall be the amount obtained by adding the amount payable for the factory excluding the power generating plant calculated as per Schedule "A" and that payable for the power generating unit as per Schedule "B" respectively.

Where a factory has its own transforming station the amount of fees payable shall be calculated in a like manner.Where a factory has its own generating station as well as transforming station for drawing additional power from an external source, the fee payable shall be the amount obtained by adding the fees which would have been payable for the Generating Station, Transforming Station and the rest of the factory, respectively as if they were separate factories.

3. In a steam power station, the capacities of the Generating units only would be taken in to account and not of the Boilers.

But if any such power station contains any boiler for supply of process steam, such boiler or part of boiler shall be separately counted for calculating the installed Horse Power.

4. In the calculation of Installed capacity all spare stand by and emergency machines and plants shall be taken into account, and shall be deemed to be working units and they shall not be excluded merely on the ground that they were only stand by, spare or emergency units, which are to be operated only on special occasions and in emergencies.

5. Where any machine is driven by an electric motor or any other prime-mover the rated capacity in Horse Power of the said motor shall be deemed to be the rated capacity of the machine, and the capacity of the motor or the prime-mover and that of the driven machine shall not be counted separately.

6. Where an electricity generating factory includes a transmitting of converting station or plant meant for recovering transforming, converting or transmitting of electric power supplied from a source outside the Generating Station and which is not meant for transforming, converting or transmitting power generated in the Generating Station itself the fees payable shall be the total of the fees payable by the Generating and Transforming (including converting) Station, calculated separately in accordance with the rate of fees prescribed under sub-head (a) and by the Transmitting Station under-sub-head (b),

"C"

Scale of fees payable for licence and annual renewal oflicence for factories declared under Section 85 of the FactoriesAct, 1948 (Act, 63 of 1948) other than Electricity Generating,Transforming and Transmitting Stations (Factories)	Rs. 105.00

Appendix 1Apertures for natural ventilationThe formula for lateral apertures (ventilating openings) for natural ventilation referred to in Rules 18 and 20 are(a)(British measure)

(1) A = {|

F| (| 1 +| □F100|)

|-|

10| (| 1 +| L - B10B|)

|}

(2) A = {|

F| (| 1 +| □F100|)| (| 1 +| L - B5B|)

|-| 10|}L = Length of room in feet.B = Breadth of room in feet.F = Floor area in square feet.A = Aggregate area of ventilating openings in sq. feet,(b)Metric System.

(1) A = {|

F| (| 1 +| □F30.48|)

|-|

10| (| 1 +| F - B10B|)

|}

(2) A = {|

F| (| 1 +| □F30.48|)| (| 1 +| L - B5B|)

|-| 10|}L = Length of room in metres.B = Breadth of room in metres.F = Floor area in square metres.A = Aggregate area of ventilating openings in sq. metres.Note. - Formula (1) applies to rooms of ordinary shape or when the ventilating openings are well distributed in rooms of any shape.Formula (2) applies to elongated rooms ventilated at the ends only.Appendix 2NotificationsNo. 11/F1-1027/65-L&E-5494, the 7th July, 1965.-In exercise of the powers conferred by sub-section (1) of Section 85 of the Factories Act, 1948 (LXIII of 1948) and in supersession of the notification no. II/FI-109/64-L.&E- 8096, dated the 29th August, 1964, the Governor of Bihar is pleased to declare that all the provisions of the said Act and the Rules made thereunder, shall apply to any place in the State of Bihar wherein the manufacturing process specified in the Schedule annexed hereto is carried on without the aid of power and wherein 20 or more persons generally work notwithstanding that any or all persons working therein are not employed by the owner thereof but are working, with the permission of, or under agreement with such owner:Provided that nothing in this notification shall apply to any place where in a manufacturing process is carried on by the owner himself or only with the aid of his family, and no other person is ever employed therein.

Schedule 48

Manufacture of Bidi.The 12th January, 1985S.O. 131, dated the 24th January, 1985.-In exercise of the powers conferred by sub-section (1) of Section 85 of the Factories Act, 1948 (LXIII of 1948), and in supersession of the Government notification no. FI-107/75-L & E.-2251, dated the 30th September, 1975, the Governor of Bihar is pleased to declare:-(A)That the provisions of the said Act and the Rules made thereunder as specified in Schedule 'X' annexed hereto shall apply to any place in the State of Bihar, wherein any manufacturing process specified in Schedule 'Y' annexed hereto is

carried on with the aid of power or is so ordinarily carried on a notwithstanding that:-(i)the number of persons employed therein is less than ten; and(ii)the persons working therein are not employed by the owner, but are working with the permission of or under agreement with such owner;(B)That the provisions of the said Act and the rules specified Schedule 'X' and those of Section 42 of the said Act shall apply to any place in the State of Bihar wherein manufacturing process-(a)of composing types for printing, printing by letter press, lithography, photographer or other similar processes;(b)of lead type founding;(c)of repairs, maintenance or painting of automobiles and motor vehicles including earth moving machinery;(d)of tar distillation and manufacture of bye products from tar;(e)of manufacture and repairs of machinery or machine parts, manufacture of any other article of metal founding or electroplating, polishing or galvanising of any article of metal;(f)of manufacture of repair of storage Batteries (Electric Accumulators);(g)of manufacture of bricks, tiles, refractory material, ceramic or mosaic goods;(h)manufacture of Soap; (i) declared to be dangerous under Section 87 of the Factories Act, 1948 and specified under Rule 95 of the Bihar Factories Rules, 1950 is carried on with or without the aid of power or is so ordinarily carried on notwithstanding that-(i)the number of persons employed is less than ten, if working with the aid of power, and less than twenty, if working without the aid of power; and(ii)the persons working therein are not employed by the owner but are working with the permission of or under agreement with such owner;(C)That the provisions of the said Act and the Rules specified in Schedule 'X' shall apply to any place in the State of Bihar wherein the manufacturing process of-(a)jute bailing and pressing;(b)manufacturing of Guns and fire arms;(c)manufacturing of silicate of soda;(d)moulding and retreading of tyres;(e)manufacture of fire works; and(f)body building of automobiles, is carried on or is so ordinarily carried on with or without the aid of power, notwithstanding that-(i)the number of persons employed therein is less than ten, if working with the aid of power and less than twenty, if working without the aid of power, and(ii)the persons working therein are not employed by the owner but are working with the permission of, or under agreement with such owner;Provided that nothing in this notification shall apply to any place wherein manufacturing process is carried on by the owner only with the aid of his family.

'X'

I (a) Chapters I and II.(b)Sections 11, 12, 13, 14, 16, 17 and 18 of Chapter III.(c)Chapter IV.(d)Sections 45 and 50 of Chapter V, and(e)Chapters VI to XI of the Factories Act, 1948.II. The Bihar Factories Rules, 1950 except Rule 3.

'Y'

1. Sawing of Timber.

2. Manufacture of ice and ice candy.

3. Manufacture of Oil.

4. Flour milling and grinding, breaking and crushing of any other cereal or material.

5. Rice Milling.

6. Dal Milling.

7. Generation and Conversion of electricity excluding transformation by State transformers.

8. Manufacture of tea.

9. Spinning, Weaving, Knitting or finishing (including dyeing) of any textile material, including hosiery and carding and breaking of cotton.

10. Pumping of sewerage including treatment and disposal thereof.

11. Chaff cutting.

12. Laundrying, including cleaning and dyeing of textile materials or apparels.

13. Manufacture of plastic and plastic products.

14. Canning and preservation of food materials, fruits and vegetables.

15. Filling bottles with aerated water or drinks and processes incidental thereto.

16. Manufacture of packing cases;

17. Transforming of power.

18. Manufacture of any electrical equipment, apparatus, appliances or device.

19. Manufacture of any explosive material, including safety fuses detonators, cartridges or any other component thereof.

S.O. 87 dated the 14th April, 1967 (Bihar Gazette Extra-ordinary dated 14th August, 1967).-In exercise of the powers conferred by Rule 71-A of Bihar Factories Rules, 1950, the Governor of Bihar

is pleased to exempt all mica splitting factories, wherein splitting, dressing or seiving of mica or processes concerned or incidental thereto is carried on, and all glass factories wherein glass works are manufactured (except sheet glass factories), employing more than 250 workers and notified under Rule 66 of the said Rules, from the provisions of Rules 66, 68 and 71 of the said Rules subject to the following conditions:-(1)In every such factory :-(a)an adequate dining hall with a kitchen hereinafter called canteen shall be provided;(b)adequate washing facilities shall be provided in the canteen;(c)the plan, elevation and necessary cross-sections of the canteen shall be submitted to the Chief Inspector of Factories and approval thereof shall be obtained before starting the construction of the canteen. Such modifications, additions or improvement shall be made therein as may be directed by the Chief Inspector;(d)arrangements shall be made for the supply of tea and snacks and such other articles of food in the canteen as may be required by the workers, or as may be in keeping with the general food habits of the workers;the articles of food shall be sold in the canteen on non-profit basis and shall be prepared and sold by the occupier departmentally and not through any contractor or any other agency;(f)the building, furniture, utensils, crockeries and other equipments required for the canteen shall be supplied by the occupier free and no charge in respect thereof shall be added to the price of the articles sold in the canteen;The Inspector of Factories may direct the occupier and/or the manager to make such improvements in these arrangements as he may consider necessary;(g)the occupier shall bear the cost of fuel, light, water and canteen staff and no charge in respect thereof shall be added to the price of articles sold in the canteen;(h)the canteen and the surroundings shall be kept neat and clean at all times;(i)the occupier shall provide adequate staff at all times when work is going on in the factory and when tea, snacks, etc. are required by the workers and all the staff shall be provided with clean dresses and uniforms; and(j)the Inspector of Factories may direct the occupier and/or the manager to increase the staff if he finds that the staff provided was not adequate.(2)Any direction given by the Inspector of Factories in accordance with these conditions shall be subject to appeal to the Chief Inspector whose decision would be final.The 26th July, 1988S.O.841, dated the 12th August, 1988.-In exercise of the powers conferred by sub-rule (1) of Rule 80-A of the Bihar Factories Rules, 1950, the Governor of Bihar is pleased to notify the following types of factories as defined under Section 2(m) of the Factories Act, 1948 and all such factories as have been notified under Section 85 of the Factories Act, 1948 to be the factories (but employing more than five workers) which shall issue identity cards to their workers:-

Schedule 51

1. Printing Press.

2. Brick kilns.

3. Mica factory.

4. Rice, Dal, Oil and Flour Mills.

5. Saw Mills.

6. Automobiles repairs and maintenance workshops.

7. Refractories.

8. Glass factories.

9. Hard Coke and Coal briquetting factories.

10. Shellac Industries.

11. Stone Crushing factories.

12. Card Board and Paper Industries.

13. Powerlooms.

[Existing Clauses (a) & (b) re-numbered as (b) & (c) thereof and clause (a) Inserted by S.O. 686 dated 13.7.1988.]