Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016

UNION OF INDIA
India

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Rule
INLAND-VESSELS-PREVENTION-AND-CONTROL-OF-POLLUTION-AN
of 2016

- Published on 13 July 2016
- Commenced on 13 July 2016
- [This is the version of this document from 13 July 2016.]
- [Note: The original publication document is not available and this content could not be verified.]

Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016Published vide Notification No. G.S.R. 687(E), dated 13th July, 2016Ministry of ShippingG.S.R. 687(E). - Whereas, the draft Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016, were published, in exercise of the powers conferred by section 54H of the Inland Vessels Act,1917 (1 of 1917) in the Gazette of India, Extraordinary, Part II, Section 3 sub-section (i) dated the 3rd February, 2016, vide GSR 144(E) dated 3rd February, 2016 as required by sub-section (1) of section 74 of the said Act inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of thirty days from the date on which copies of the Gazette containing the said draft rules were made available to the public.The said notification was made available to the general public on the third day of February i.e., the 3rd February, 2016.And, whereas, objection and suggestions received in respect of the said draft rules have been considered by the Central Government.Now, therefore, in exercise of powers conferred by section 54H of the Inland Vessels Act, 1917, the Central Government makes the following Rules, namely:-

1. Short title and commencement.

(1)These rules may be called the Inland Vessels (Prevention and Control of Pollution and Protection of Inland Water) Rules, 2016.(2)They shall come into force on date of their publication in the Official Gazette.

2. Definitions.

(1)In these rules, unless the context otherwise requires. -(a)"Act" means the Inland Vessels Act, 1917;(b)"any person" means any person authorised under section 54G of the Act which includes a survey or appointed under sub-section (1) of section 4 of the Act;(c)"bilge water" means waste water collected in bilge of the vessel;(d)"holding tank" means a tank used for the collection and storage of oily mixture or bilge water or sludge or pre wash of chemicals and obnoxious substances;(e)"inland port" means a port located on Inland Waterway with the requisite facilities for safe berthing of vessels, loading and unloading arrangement of cargo, storage of cargo on land and provide water supply and fuel;(f)"Schedule" means the Schedule annexed to these rules; and(g)"sludge" means sludge from the fuel or lubricating oil separators, waste lubricating oil from main auxiliary machinery, or waste oil from bilge water separator, oil filtering equipment or drip trays.(2)Words and expressions used in rules and not defined but defined in the Act, shall have the meaning assigned to them in the Act.

3.

The chemicals and substance specified in Schedule Ishall be the hazardous chemicals and 'obnoxious substances for the purpose of a clause (a) section 54D.

4. Measures to prevent and control of pollution to protect inland water.

- Every inland port shall provide oily mixture treatment equipment on shore as specified in Schedule II, within one year from the date of coming into force of these rules.

5.

Every inland vessel above 1000 Gross Tonnes shall be equipped with oily mixture treatment equipment or board as specified in Part I of Schedule III, within one year from the .date of coming into force of these rules. '

6.

Every' inland vessel shall be equipped with a holding tank or equivalent arrangement of capacity as specified in Part II of Schedule III.

7.

Every inland port shall provide reception facilities specified in Schedule IV, based on the nature of' operation taking place on twenty four hours basis without delaying the vessel unreasonably, within one year from the date of coming into force of these rules.

8.

An inland port at cargo or passenger terminal shall maintain Form and Record Books as specified in Schedule V.

9.

At any time after one year from the coming into force of these rules, an inspection shall be carried out under section-54G of the Act by the surveyor or any person authorised by the State Government in this behalf and the following actions shall be taken,-(i)if the Inland port is found to be provided with pollution containment equipment and removing material conforming to the orders of the State Government under section 54F of the Act or the rules made thereunder by the Central Government' under Chapter VIAB, a certificate of compliance or conformity shall be issued in the Form prescribed in Schedule VIII;(ii)if the surveyor finds that the Inland port is not provided with pollution containment equipment and removing material conforming to the orders of the State' Government under section 54F of the Act or the rules made thereunder by the Central Government under Chapter VIAB, a notice in the Form as prescribed in Schedule VI pointing out deficiencies and directing the owner of the Inland port to take remedial action and report compliance within a period of thirty days from the date of receipt of notice; and(iii)after compliance is reported and the surveyor is satisfied, a certificate of compliance or conformity shall be issued in the Form specified in Schedule VII.

I

(see rule 3)List of hazardous chemicals or obnoxious substances in bulk or in packaged form including wastesHazardous chemicals or Obnoxious SubstancesAcetic anhyrideAcetoneAcetone CyanohydrinAcroleinAcrylonitrileAldrinAllyllsothiocyanateAluminium phosphideAmonia (28% aqueous)Ammonium phosphateAmyl mercaptanAnilineAniline hydrochlorideAntimony compoundsAtrazineAzinphos methyl (Guthion)Baiium azide,Barium oxideBenzeneBenzenehexachloride isomers (Lindane)BenzidineBeryllium PowderBromineBromobenzyl cyaniden-Butyl acrylateButyric acidCacodyliccompoundsCarbaryl (Sevin)Carbon disulphideCorbontetrachlrideChloridaneChloro~CetophenoneChlorodinitrobenzeneChloroformChlorolhydr acid (Chromium trioxide)Cococculus (Solid)Copper compoundsCresolsCupriethylenediamineCyanide compoundCyanogen bromideCyanogen chlorideDOTDichloroanilicesDichlorobenzenesDieldrinDimethoate (Cygon)Dimethyl amine (40%aqueous))Dinitroanillnes

4.

6.

-DinitroorthocresolDinitrophenolsEndosulphan (Thiodan)EndrinEpichlorohydrinEthyl bromoacetateEthylene chlorohydrin (2-Chloro-ethanol)Ethyl parathionFentin acetate (dry)Fluosilicic acidHeptachlorHexachlorobenzeneHexaethyltetraphosohateHydrocyanic acidHydrofluoric acid n(40% aqueous)IsopreneLead compoundsLindane (Gammexane. BHC)MalathionMereuric compoundsMethyl alcoholMethylene chlorideMolassesNaphtalene (moltem)NaphthylthioureaNitcic acid (90%)OleumParathionParaquat,PhenolPhosphoric acidPhosphorus (elemental)Polyhalogenated biphenylsSodium pentachlorophenate (solution)Styrene monomerTolueneToluene diisocyanateToxapheneTritolyl phosphate (Tricresyl phosphate)

2. 4. 5- T

Liquefied Gases (when carried in bulk)AcetaldehydeAnhydrous AmmoniaButadieneButaneButane/Propari mixturesButylenes.ChlorineDimethylamineEthyl chlorideEthaneEthyleneEthylene OxideMethane (LNG)Methyl Acetylene Propadlene mixtureMethyl BromideMethyl ChloridePropanePropyleneVinylChloride MonomerAnhydrous Hydrogen Chloride Anhydrous' Hydrogen Fluoride or SulphurDioxlde.

II

(see rule 4)Prescription for oily mixture treatment equipment for Inland PortOily Mixture treatment equipments.

1. Preliminary treatment:

Settling tanks: The effluent oil concentration for an API separator shall be 50-200 ppm.

2. Secondary treatment:

(i)Chemical emulsion breaking or flocculation and floatation:, The water phase effluent quantity of 20-40 ppm shall be achieved with this technique. A large variety of chemicals are available for emulsion breaking. Most frequently iron or aluminum salts and charged polymers are used for emulsion breaking;(ii)Filtration: The water phase effluent oil concentration shall be approximately 20 ppm, which can be lowered to 5 ppm, when flocculation chemicals are added.(iii)Hydrocyclones: Hydrocyclones use the density difference between oil and waterforseparation and separation is achieved. by centrifugal force. The waste water effluent concentration shall be reached with hydrocyclones is approximately 5-15 ppm.(iv)Centrifuges: They work on the same principle as hydrocyclones. However, they are not static, as the equipment is rotated. They can be used for 3 phase separation (Oil, water and solids).(v)Molecular Coalescence oil or water separator: The main principle is the molecular coagulation of like molecules. The coagulation is achieved by changing the energy pattern from a tranquil phase to a rapid phase. The water content of the oil is less than 10% and frequently less than 1%.

3. Tertiary treatment:

Biological treatment:Here the use of micro-organisms for degrading dissolved organic components in wastewater streams is done. For treatment of oily waste, standard aerobic activated' sludge treatment can be used. The discharge level of oil in the effluent shall be reduced to less than l' ppm by this treatment.

4. Specification for oily mixture treatment equipment on shore:

(i)The oilcontent of the effluent from the treatment unit shall beas minimum as possible but in no case it exceed 15p(ii)Thetreatment equipmentshall be strong and robust in construction and suitable for use.(iii)Any' electrical equipment thatis part of the treatment unit shall be located in a non-hazardous area or certified by thecompetent authority as safe for use in hazardous areas.(iv)The treatment unit shall be so designed that it functions automatically. A fail-safearrangement to avoid any discharge in case of malfunction shall be provided.(v)The system shall require minimum maintenance and attention to bring it into operation.'It shall be capable of operating at least twenty four-hours of normal duty without attention.(vi)A ppm display and alarm shall be provided(vii)The accuracy of the ppm alarm shall be checked as per manufacturer's instruction speriodically as directed by the competent person. A copy of calibration certificate, certifying the date of calibration shall be retained by the port for inspection purpose.

III

(see rules 5 and 6)Prescription for oily mixture treatment equipment for Inland vesselPart -I Oil filtering equipment (15 ppm bilge, separator):-(1)The 15 ppm bilge separator shall be strongly constructed and suitable for vessel's use bearing in mind its intended location on the vessel.(2)It shall, if intended to be fitted in locations where flammable atmospheres may be present, comply with the relevant safety regulations, for such spaces.(3)The 15 ppm bilge separator shall be so designed that it functions automatically. However, safe arrangements to avoid any discharge in case of malfunction shall be provided.(4)Changing the feed to the 15 ppm bilge separator from bilge to oil bilge water to emulsified bilge water, or from oil and water to air shall not result in the discharge overboard of any mixture containing more than 15ppm of oil.(5)The system shall require the minimum of attention to bring it into operation. In the case of engine room bilges, there shall be no need for any adjustment to valves and other equipment to bring the system into operation. The equipment shall be capable of operating for at least twenty-fourhours of normal duty without attention.(6)All working parts of the 15 ppm bilge separator which are likely to be damaged shall be easily accessible for maintenance.

15. ppm bilge alarm : -

(1)The 15 ppm bilge alarm shall resist corrosion in the conditions of the marine environment.(2)Any electrical equipment which is part of the 15 ppm bilge alarmshall be placed in a non-hazardous area.(3)A ppm display shall be provided. Onboard testing according to manufacturer's instructions shall be carried out.(4)The response time, that is the time which elapses between analteration in the

sample being supplied to the 15 ppm bilge alarm and the ppm display shall not exceed five seconds.(5)The 15 ppm bilge alarm shall record date, time and alarm status and operating status of the15 ppm bilge separator. The recording device shall also store data for at least eighteen months.(6)The accuracy of the 15 ppm bilge alarms shall be checked at renewal survey according to the manufacturer's instructions. The calibration certificate for the 15 ppm bilge alarm, certifying date of last calibration check, shall be retained on board for inspection purpose.Part-II Holding tank for Inland vessel:-The capacity of bilge water holding tanks shall be as follows: -Vesselsbelow 150grt or main engine rating upto 750kw.... 1.0m3Vessels (>150grt and <400grt) or main engine rating upto 1000Kw 1.5 mVessels(>400 grt and <3000 grt) or main engine rating(>1000KW and <20,000kw) capacity: 1.5+(P-1,000)/1,500 ,m3Vessels(>3000grt) or main engine rating (>20,000kw)Capacity: 14:2+0.2 (P*-20,000)/1,500m3*(P=main engine rating in kw)Provided that for Inland Vessels of less than 150 grt, where due to space constraints, it is not practicable to provide 1.0m3 holding tank, the surveyor may allow for providing 0.5m3 holding tank for Inland Vessels of 250 kw to 750 kw engine rating and 0.25m3 for less than 250 KW engine rating.

IV

(see rule 7)Details of reception facilities for oil or oily mixture, sludge or waste and designated pollutants.A. General provision:(1)The treatment facility shall be established at Inland Port, but the collection equipment can either be mobile or shore based at a central point.(2)Collection of oily wastes can be either by floating reception facilities likebarges of adequate capacity either towed if non-propelled or self propelled or by fixed reception facilities such as one central shore based waste collection point in inland port. The State Government may prescribe the type of facility based on the size and nature of operation of the Inland port.B. Port reception facilities for hazardous chemicals or obnoxious substances : -Details of components:Buffering and equalizingIn buffering/equalizing tanks, the process flow is continuous by using the tanks as buffers and the composition of the waste stream is equalised by mixing several batches of oily waste.Plate SeparationPlate separators work on the principle of increasing the surface area of separation, resulting in a better separation. The water phase effluent reached with a plate separator is approximately 20-100ppm.FlocculationThe water phase effluent quantity of 20-40 ppm shall be achieved with this technique. A large variety of chemicals are available for emulsion breaking. Most frequently iron or aluminum salts and charged polymers are used for emulsion breaking.FlotationThis is a unit operation used to separate solid or liquid particles from a liquid phase. Air bubbles are injected into a waste water tank and the rising air bubbles will attach to the flocculated oil particles and increase their buoyancy. The combined particles and gas bubbles will rise to the surface and the floating particles can be collected.Biological treatmentHere the use of micro-organisms for degrading dissolved organic components in wastewater streams is done. For treatment of oily waste, standard aerobic activated sludge treatment can be used. The discharge level of oil in the effluent shall be reduced to less than 1 ppm by this treatment.C. Port reception facilities for oil or oily mixtures or sludge or wasteAs specified is Schedule II.

V

(see rule 8)Record book for receipt of designated pollutants in inland port.....(period from.....to.....)

S. No.	Name of the vessel	Time and date of receipt of designated mixture or sludge waste	pollutants/oil/	Name of Inland port	Type of pollutant received	Quantity of pollutants received	Fee levied for the receipt	Method of disposal adopted	Remarks
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Name and signature of authorised officialSeal or stamp of the authority

VI

(see rule 9 (ii))Format for Notice under section 54G (1), (2) and (3)Government of..... (Name of State Government)(Notice Under Section 54G (1), (2) and (3)This is to bring to your notice that Inland port (name of the port).....was inspected under the provision of 54G of the Inland Vessels Act, 1917 on (date and year).....at (time)..... The inspection revealed the following deficiencies (please mention the relevant order or rules violated against each deficiency)

Deficiencies	Relevant rules or Order
1.	.....
2.	.....
3.	.....
4.	.....

You are hereby advised to take the following remedial action and report compliance

1. .....

2. .....

3. .....

4. .....

Take notice that till the time the above remedial action is taken, all operations at your Cargo/Passenger terminal will remain suspended.Place of Issue: .....Date of Issue: .....(Name and Signature of the surveyor issuing the certificate)(Seal or stamp of issuing authority, as appropriate)

VII

(see rule 9(iii))Government of ..... (Name of State Government)Reference number:Certificate of Compliance/conformity (in context of Schedule VI)Name and address of Inland Port:This is to certify that the Inland port (name of the port) ..... has been inspected to verify the compliance of deficiencies stated in Schedule VI. The port now is found to be complying with the requirements as stated in section 54G of the Inland Vessels Act, 1917 and therefore permitted to resume the operations.The date of verification of compliance is .....Place of Issue: .....Date of Issue: .....(Name and Signature of theSurveyorIssuing the Certificate Surveyor)(Seal or stamp of Issuing authority, as appropriate)

VIII

(see rule 9 (i))Government of ..... (Name of State Government)Certificate of Compliance/conformity(Issued under section 54F and 54H)Certificate/Serial number---.Name and address of Inland Port:This is to certify that the Inland port (name of the port) ..... has been inspected to verify the compliance of the relevant provisions with respect to equipment, material, containment, treatment and adequacy of reception facilities. The Inland port demonstrates the compliance of stated provisions and therefore Certificate of compliance or conformity is now issued to the Inland port. The validity of this compliance or conformity expires on ..... from the date of issue, but not later than a period of one year subject to the conditions stated below:

1. Prevention and preservation of inland water shall always be given priority over other operations.

2. Any incidents of oil pollution or chemical spillage affecting the port shall be notified to the issuing authority.

3. Any incident of casualty with respect to pollution affecting the port operations shall be notified to the issuing authority.

4. Any malfunction or defect of or in oily water equipment affecting prevention of pollution and preservation of inland water shall be notified to the issuing authority.

5. Any activity relating to new development in Inland port shall be immediately reported to the issuing authority for the purpose of conducting review in respect of any additional requirements.

The date of verification of compliance is .....Place of Issue : .....Date of Issue : .....(Name of Signature of theSurvey or Issuing the Statement)(Seal or stamp of Issuing authority, as appropriate)