



भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS

नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI



Merchant Shipping Notice No. 13 of 2023

File No. 13-20011/3/2020-ENGG-DGS (C-3205)

Date: 09.11.2023

Subject: Implementation of Amendments to MARPOL Annex IV and Clarifications on the interpretation of MARPOL Annex IV - reg.

Purpose

1. India ratified MARPOL Annex IV on 11 June 2003 and it entered into force on 27 September 2003.
2. Merchant Shipping Rules (Prevention of Pollution by Sewage from Ships) were notified on 7 January 2010.
3. This Notice provides guidance and instructions on the application of Annex IV of the International Convention for the Prevention of Pollution from Ships 1973, to Indian ships.
4. The implementation of MARPOL Annex IV on Indian Flag Ships are as below:
 - i. Ships Certified as Per Merchant Shipping Act 1958.
 - ii. Ships Registered under Notification for Construction, Survey, Certification and Operation of Indian River Sea Vessels Type 1, 2,3& 4 issued vide DGS Order 18 of 2013: To be surveyed and certified as per the Notification and comply with Paragraph 11.8 of Annex 11 of this Notification.
 - iii. Ships Registered under Notification for Construction, Survey, Certification and Operation of Indian Coastal Vessel: To be surveyed and certified as per the Notification and comply with Paragraph 10.9 of Annex 10 of this Notification.

Exceptions

5. Regulation 11 of MARPOL Annex IV does not apply to:
 - i. the discharge of sewage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or
 - ii. the discharge of sewage resulting from damage to a ship or its equipment if all reasonable precautions have been taken before and after the occurrence of the damage, for the purpose of preventing or minimizing the discharge.
6. Any discharge of sewage under above paragraphs 5.i or 5.ii shall be promptly notified to the Competent Authority in Directorate General of Shipping (psc-dgs@nic.in) and the details recorded in the Official Log Book.

Special Areas

7. Special Areas for the purposes of MARPOL Annex IV are as follows:
 - i. the Baltic Sea, as defined in Regulation 1.11.2 of MARPOL Annex I.

Surveys and certification (Regulations 4 to 8)

8. MARPOL Annex IV applies to following types of Indian ships registered under MS Act, 1958:
 - i. of 400 gross tonnage and above and not certified under SPS Code; or
 - ii. of less than 400 gross tonnage, which are certified to carry more than 15 persons, including private (non-commercial) yachts.
 - iii. Above is applicable to all vessels operating in national waters or on international voyages.
9. The ships of 400 GT and above are to be issued with International Sewage Pollution Prevention Certificate subject to satisfactory initial and renewal surveys.
10. Vessels less than 400 GT and carrying less than 15 persons on board and are installed with sewage systems detailed under 13a), 13b) and 13c) are to be issued with Indian Sewage Pollution Prevention certificate subject to satisfactory initial and renewal surveys. RSV and ICV vessels are to be certified as per respective notifications.

Sewage systems (Regulation 9)

11. The propelled ships of 400 GT and of less than 400 GT, which are certified to carry more than 15 persons, including private (non-commercial) yachts except those certified under SPS Code are required to be equipped with one of the following sewage systems:
 - i. A sewage treatment plant; or
 - ii. A sewage comminuting and disinfecting system; or
 - iii. A holding tank of sufficient capacity for the retention of all sewage.
12. Provision of holding tank/s may be considered in lieu of a sewage treatment plant based on consideration that voyages to offshore are made occasionally and subject to the capacity of the holding tanks are adequate taking into account the duration of such voyage and total number of persons carried.
13. Every Vessel of GT less than 400 and are certified to carry less than 15 persons shall be:
 - a) Installed with a sewage treatment plant, or
 - b) Installed with a sewage comminuting and disinfecting system, or
 - c) Installed with a at least, a holding tank of such capacity sufficient for the retention of all the sewage, or
 - d) If does not have a sewage handling system installed as stated above in para 14.a), 14 b) and 14 c); the vessel should be:
 - i. Using onshore toilet facilities whenever possible, and/or
 - ii. Using a portable toilet to be later emptied to a sewerage/septic system on shore, or
 - iii. Retain sewage in on-board holding tank for pumping out to shore facilities.

Sewage treatment plants (Regulation 9.1.1)

1. Sewage treatment plants shall be type approved by a Recognised Organisation on behalf of any flag administration or by any flag administration as follows:
 - i. sewage treatment plant installed prior to 01 January 2010 shall comply with resolution MEPC.2(VI); or
 - ii. sewage treatment plant installed on or after 01 January 2010 but prior to 01 January 2016 shall comply with resolution MEPC.159(55); or
 - iii. sewage treatment plant installed on or after 01 January 2016 shall comply with resolution MEPC.227(64)

2. Sewage treatment plants to be type approved by RO on behalf of the administration taking into account DGS Order 06 of 2013.
3. The paragraph 4.2 of MEPC.227 (64) (for sewage treatment plants installed on passenger ships intending to discharge sewage effluent in special areas) does not apply to Special Purpose Ships.

Sewage comminuting and disinfecting systems (Regulation 9.1.2)

4. Regulation 9.1.2 requires sewage comminuting and disinfecting systems to be approved by the Administration; however, there are currently no international standards for comminuting and disinfecting systems.
5. For Indian ships, the standards for sewage comminuting and disinfecting systems are as follows
 - i. Faecal Coliform Standard: Faecal coliform bacteria in the effluent should not exceed 1000/100 cm³ Most Probable Number (M.P.N.);
 - ii. Chlorine residual level to be no more than 0.5mg/l, (by test) post maceration;
 - iii. Comminuting Standard: A sample of one litre is passed through a US Sieve No. 12 (with openings of 1.68 mm). The weight of the material retained on the screen after it has been dried to a constant weight in an oven at 103°C must not exceed 10% of the total suspended solids and shall not be more than 50mg.
6. Ships fitted with sewage comminuting and disinfecting systems shall also be fitted with a sewage holding tank(s) for the temporary storage of sewage whilst the ship is less than 3 nautical miles from land.

Sewage holding tanks (Regulation 9.1.3)

7. Sewage holding tanks shall have following capacity for the retention of all sewage, having regard to the operation of the ship, the number of persons on board and other relevant factors.

Type of discharge Control	Liters per Person Per Day	
	Conventional System	Vacuum System
Sewage (black water)	60	25
Sewage (black and grey water)	230	185

8. Capacity of the tank should be at least sufficient to hold the sewage for one day or as per the voyage pattern of the vessel, the maximum number of days operating in areas where the discharge of sewage which is not comminuted or disinfected into the sea is prohibited (minimum 1 day).
9. Sewage holding tanks shall be constructed to the satisfaction of the Recognised Organisation that classes the ship and shall have a means to indicate visually the amount of its contents (e.g. a sight glass).
10. The sewage system should not have fixed connections to ballast water systems.

Discharge of Untreated Sewage

11. Untreated sewage stored in Sewage holding tanks as specified in Regulation 9.13 of MARPOL Annex IV, shall not be discharged instantaneously but at a moderate rate when the ship is en-route and proceeding at not less than 4 knots.
12. The rate of discharge referred to in Regulation 9.1.3 and above shall be approved by flag administration or the Recognised Organisation on behalf of the flag administration, based upon the ship's maximum summer draft and maximum service speed and in compliance with IMO Resolution MEPC.157(55).

13. Where sewage is to be discharged at a different combination of draft and speed, the calculations may be approved for one or more secondary discharge rates.
14. The maximum approved discharge rate shall not be exceeded for the discharge of untreated sewage from:
 - i. holding tanks and spaces containing living animals;
 - ii. Bypass is not to be considered as regular arrangement and rate of discharge calculations should not be approved for a treatment plant as this may lead to prolonged operation of the faulty STP. Vessels installed with STP should not be using the bypass valve in normal operations (except where allowed by MARPOL Annex IV regulation 3)
 - iii. Storage of sewage in ballast tank or any other tank is not allowed. Sewage here is meant as black water.

Discharge of sewage from passenger ships within a special area (Regulation 11B)

15. The special area requirements come into effect as follows per MEPC.275(69):
 - a) 1 June 2019 for new passenger ships defined as passenger ships with a building contract placed on or after 1 June 2019 OR delivered after 1 June 2021.
 - b) 1 June 2021 for existing passenger ships other than those specified in paragraph c) below; and
 - c) 1 June 2023 for existing passenger ships en route directly to or from a port located outside the special area and to or from a port located east of longitude 28°10' E within the special area that do not make any other port calls within the special area;

Discharge of bio residuals (“sewage sludge”)

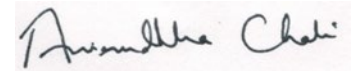
16. The process of treating raw sewage in approved sewage treatment plants results in liquid effluent that is discharged to sea periodically and bio residuals or “sewage sludge”. Sewage sludge is an unavoidable by-product of the treatment process and is produced by all sewage treatment plants.
17. In order to ensure that the treatment plant continues to operate effectively and efficiently, it is usually necessary to dispose of sewage sludge periodically. The sewage sludge to be:
 - i. discharged to shore reception facilities, where available; or
 - ii. discharged at not less than 12 nautical miles from the nearest land
18. IMO Resolution MEPC.157(55) does not apply to the discharge of sewage sludge.

Exceptional storage of treated wastewater, or Grey Water in ballast water tanks

19. For the purposes of this Notice, “treated wastewater” (TWW) is the treated liquid effluent discharged from the sewage treatment plant.
20. Grey water is defined as drainage from dishwater, galley sink, shower, laundry, bath and washbasin drains. Grey water is not considered sewage unless it is mixed with drainage from toilets, urinals, hospitals, and animal spaces, as defined in Regulation 1.3 of MARPOL Annex IV.
21. It is recognised there are exceptional situations where, to comply with coastal State regulations or where there are inadequate reception facilities at ports and terminals, it may become necessary to store TWW or grey water in ballast water tanks.
22. The Directorate may permit the use of ballast tanks as temporary storage of TWW or Grey Water subject to the following conditions:
 - i. the ballast tank is temporarily isolated from the ballast system, so that no accidental discharge via the ballast system can take place within restricted waters ;
 - ii. for TWW and/or Grey Water, the ballast tank, pipes and pumps are adequately flushed prior to being returned to use for ballast;

- iii. the tank is verified gas free if it is to be entered after having carried TWW and in particular, the atmosphere should be tested for the presence of Hydrogen Sulphide (H₂S) gas.
 - iv. the temporary treated sewage/grey water holding tank shall not be located in hazardous areas of the ship.
 - v. Entries are to be made in the log book regarding the transfer and discharge of such treated sewage and grey water to the ballast tank.
 - vi. Port authorities to be informed of the temporary arrangement prior arrival to the port.
 - vii. Treated sewage and the grey water being stored in such tank is to be discharged in accordance with the port/coastal state rules and requirements or is to be discharged beyond port limits, while ship is en route and beyond 12 NM from the nearest land.
23. Any ballast water tank, if being used for storage of grey water or treated sewage, could contaminate or damage the Ballast Water Treatment System and result in the discharged ballast water not meeting the discharge standard specified in Regulation D-2 of the BWM Convention (unless the BWTS is certified to meet the D-2 standard when processing such mixtures). Hence it is to be ensured that the treated sewage or the grey water is not being stored in the ballast tank, especially when the ballast water treatment system requires the treatment during the de-ballasting also. However, the grey water and treated sewage can be stored in case the following is complied with:
- i. The tank(s) shall be connected to only one system at any time;
 - ii. The system is to be arranged such that grey water or treated sewage cannot contaminate the ballast water treatment system;
 - iii. The tank(s) shall be empty before change of use;
 - iv. The tank(s) shall be adequately flushed after containing grey water or treated sewage, prior to being returned to use for ballast.

This is issued with the approval of the Director General of Shipping & Additional Secretary to the Govt. of India.



(Aniruddha Chaki)
E&SS-cum-DDG (Tech.)

To,

1. The Principal Officer/ Mercantile Marine Department, Mumbai/Kolkata/ Chennai/ Kandla/Kochi.
2. The Surveyor-in-charge, Mercantile Marine Department, Goa/Jamnagar/Port Blair /Visakhapatnam /Tuticorin /Noida /Haldia/ Paradip /Mangalore.
3. All Recognised Organizations.
4. Indian National Ship-owners' Association (INSA), Mumbai.
5. CS/NA/Dy.CSS
6. Hindi Cell with request to provide Hindi translation.
7. Computer Cell with request to upload on DGS website