



## TECHNICAL CIRCULAR No. 151 of 27<sup>th</sup> October 2013

To:	All Surveyors/Auditors
Applicable to flag:	All Flags
Subject:	<b>Sewage Surveys</b>
Reference	<b>MARPOL Annex IV</b>

### **SEWAGE FROM SHIPS**

#### **1 General**

MARPOL 73/78 Annex IV, "Regulations for the Prevention of Pollution by Sewage," will enter into force on 27 September 2003. According to RESOLUTION MEPC.88 (44), adopted on 13 March 2000, the provisions of the revised Annex IV will be implemented upon the entry into force of the existing Annex IV.

The amendments to MARPOL Annex IV, MEPC.115 (51), enter into force on 1 August 2005. Accordingly, these amendments should be applied to all new ships and existing ships as of the entry into force date.

A new ship is one which meets either of the following criteria:

- Contracted for construction on/after 27 September 2003 or, in the absence of a construction contract, the keel is laid on/after 27 September 2003, or
- The ship is delivered on/after 27 September 2006.

In the revised Annex IV, particular attention shall be given to the application for "New" and "Existing," as follows:

- New ships of 400 gross tonnage and above;
- New ships of less than 400 gross tonnage that are certified to carry more than 15 persons;
- Existing ships of 400 gross tonnage and above, 5 years after the date of entry into force (27 September 2008);

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- Existing ships of less than 400 gross tonnage that are certified to carry more than 15 persons, 5 years after the date of entry into force (27 September 2008); and
- Ships, including barges and fixed or floating marine structures.

NOTE: Unmanned barges or structures without any sewage equipment or arrangements need not be issued with an ISPPC certificate.

Sewage, as defined by Regulation 1.3 of the revised Annex IV, means drainage and other wastes from any form of toilets, urinals, medical premises via wash basins, wash tubs, and scuppers located in such premises, spaces containing living animals, and other waste waters when mixed with these drainages.

Scuppers are deck drains; at MEPC 44 it was agreed to delete the word "WC scuppers" (i.e., deck drains in the vicinity of the WC - toilet) from Regulation 1(3)(a) of the existing Annex IV.

Scuppers from the deck of a "unit lavatory" (consisting of shower, WB - wash basin, and WC) or of a "unit bath" (consisting of shower, bath, WB, and WC) need NOT be treated as sewage.

CONARINA will issue the International Sewage Pollution Prevention Certificate (1973), as requested, provided the vessel fully complies with the requirements of Annex IV and the Administration has authorized issuance of a certificate on its behalf.

For existing vessels provided there is a copy of the sanitary system drawings onboard, plan review is not required unless sewage system has been modified.

### 1.1 MARPOL Annex IV Amendments

- I. Amendments to the Revised Annex IV, MEPC.88 (44), were adopted as Resolution MEPC.115 (51). MEPC.115 (51) includes the amendments into the text and the revisions are:
  - (a) Regulation 7: The language of the country issuing the ISPPC should take precedence in case of a dispute or discrepancy;
  - (b) Regulation 9: Wording change to "taking into account" to clarify that the Standards are recommendatory;
  - (c) Regulation 10: Change the units to read "600 KPa" to make it consistent with the SI system.
  
- II. MEPC.200 (62) - Entry into force date: 1 January 2013
  - (a) Regulation 9.2 (new): Passenger ships operating in a special area must be equipped with either an Sewage Treatment Plant (STP) or a holding tank that should be discharged to a reception facility when in a special area.

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(b) Regulation 11.1.1: Sewage originating from spaces containing living animals can be discharged overboard at a moderate rate when the ship is en route and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration.

(c) Regulation 11.3 (new): the discharge of sewage from a passenger ship within a special area shall be prohibited:

i) for new passenger ships on, or after 1 January 2016; and

ii) for existing passenger ships on, or after 1 January 2018;

except when the ship has in operation an approved sewage treatment plant which has been certified by the Administration and the effluent shall not produce visible floating solids nor cause discoloration of the surrounding water.

## 1.2 MARPOL Annex IV Interpretations

1. MEPC 56/23 Annex 17 - For application of resolution MEPC. 159(55), the phrase "installed on board a ship on or after 1 January 2010" shall be interpreted as follows:

(a) For new ships, installations on board ships the keels of which are laid or which are at a similar stage of construction on or after 1 January 2010.

(b) For existing ships, new installations with a contractual delivery date to the ship on or after 1 January 2010 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2010.

2. MEPC 57/21 Annex 8 - In regulation 1.1 "A similar stage of construction" means the stage at which:

(a) construction identifiable with a specific ship begins; and

(b) assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material, whichever is less.

## 2. Surveys

Every ship which is required to comply with the provisions of Annex IV shall be subject to the surveys specified below:

- I. When the ship is fitted with a sewage treatment plant (STP), the plant shall be of a type approved by the Administration, taking into account the standards and the test methods developed by the Organization.

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Effluent from an approved STP could be discharged overboard (directly from the STP or from a tank holding with effluent) without geographic restrictions unless prohibited by the Coastal State, provided that it is not mixed with waste water (e.g., oily bilge water). If the effluent is introduced into another waste water system (e.g., oily bilge water holding tank), then that combined waste water and effluent would also be subject to the waste water requirements covered by the other Annex(es) of MARPOL in accordance with MARPOL IV/11.3. This includes the need for the Oily Water Separator (OWS) to be approved to process treated sewage/STP effluent in addition to being approved to process oily water. In this regard, a statement from the manufacturer attesting to the performance of the OWS when treated sewage/STP effluent is introduced would be acceptable.

Proposals to use the oily bilge water holding tank to hold STP effluent are to be accompanied by documentation to demonstrate that the capacity of the oily bilge water holding tank (recommended capacities are contained in MEPC.1/Circ.642) will remain sufficient to accommodate the oily bilge water produced in port. An estimate of oily bilge water and treated sewage generated onboard during the time period when the ship is operating in areas where sewage discharge is prohibited is to be provided. If there is a question as to the adequacy of the oily bilge water holding tank capacity, the surveyor should contact the administration through the CNR contact office to obtain confirmation that the system is acceptable.

Effluent from an approved STP is not to be discharged into a MARPOL Annex I sludge tank.

2. When the ship is fitted with a system to comminute and disinfect the sewage, such a system shall be of a type approved by the Administration.

Refer to Attachment D for MEPC.2 (VI), "Recommendation on international effluent standards and guidelines for performance tests for sewage treatment plants," which describes the standards that sewage treatment plants are to be taken into account. For equipment installed on or after 1 January 2010, refer to Attachment E - MEPC. 159(55) "Revised Guidelines on Implementation of Effluent Standards and Performance Tests for Sewage Treatment Plants".

3. When the ship is equipped with a holding tank, the capacity of such tank shall be to the satisfaction of the Administration for the retention of all sewage having regard to the operation of the ship, the number of persons on board, and other relevant factors. The holding tank shall have a means to indicate visually the amount of its contents. The "means to indicate visually the amount of its content" may be local or remote. Recognizing that sewage fouls sight gauges, it is recommended that a practical means of "visually" determining the level of a raw sewage tank consists of a combination of sounding tube and, as a minimum, either a remote or local high level audible/visual alarm arrangement or preferably, an electronic tank level measuring arrangement. The height of the sounding tube should be at least at the level of the lowest water closet.

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NOTE: As only a few Administrations have specific requirements for holding tank capacity, e.g., the Hellenic Republic, Liberia, the Marshall Islands and the Netherlands, the use of USCG requirements may be recommended to an Administration. The USCG requirements are contained in the USCG Marine Safety Manual, Vol. II: Material Inspection, SECTION C: INSPECTION OF ENGINEERING SYSTEMS, EQUIPMENT, AND MATERIALS, and CHAPTER 2: INSPECTIONS OF VESSEL EQUIPMENT AND MATERIALS.

4. All ships, irrespective of their size and of the presence of a sewage treatment plant or sewage holding tank, are required to be equipped with a pipeline leading to the exterior convenient for the discharge of sewage to a reception facility and such a pipeline is fitted with a standard shore connection in compliance with Regulation 10 of Annex IV. Accordingly, existing ships cannot be certified unless the discharge connection is fitted or an exemption is granted by the flag Administration.

5. Standards for the "moderate" rate of discharge of untreated sewage from holding tanks, or directly overboard, from ships.

CNR considers that:

(a) Approval by the Administration is effected through the Administrations' adoption of resolution MEPC.157 (55) on 13 October 2006 at IMO; and,

(b) Explicit approval of the "moderate" discharge rate by the Administration is required when so instructed (refer to the CNR Survey Status Comments) or where the rate of discharge is more than the rate contained in resolution MEPC.157(55).

With regard to item 5a above, a copy of the letter sent to owners and operators shall be retained onboard as evidence that the rate of discharge is approved by the Administration. After any survey of the ship under Regulation 4 has been completed, no significant change shall be made in the equipment, fittings, arrangements, or material covered by the survey without the approval of the Administration, except the direct replacement of such equipment or fittings.

6. Surveyor to amend compartment label when ballast tank has been noted to be in use as both ballast and sewage holding tank.

### 3 ISPP Certificate (1973)

An International Sewage Pollution Prevention Certificate shall be issued to the ship after survey in accordance with Annex IV Regulation 4.

- I. An initial survey shall be carried out before a ship is put into service or certified for the first time.

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- II. Renewal surveys shall be carried out at intervals specified by the Administration but not exceeding 5 years.
- III. An additional survey shall be made after any important repairs or renewals are made. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory, and that the ship complies in all respects with the requirements of MARPOL Annex IV.

For the purposes of the certificate, an entry is required for the number of persons which the ship is certified to carry.

NOTE: Unless indicated in the type approval certificate of the sewage treatment system, the number used for the aforementioned entry shall be taken from the SLE or SLP Certificate, that is, the number of persons provided for by the life-saving appliances.

It is possible to include more than one sewage system on the ISPP certificate. However, when a holding tank is indicated as the option, this tank is to be for holding raw sewage and is to be in compliance with MARPOL Annex IV/reg 9.1.3. Tanks holding treated sewage (reg 9.1.1 or 9.1.2) may be listed as a holding tank on the ISPP certificate at owner's request, provided that the tanks comply with MARPOL Annex IV/reg 9.1.3.

### 3.1 Additional tank:

Tanks that may hold sewage after it has been treated by either an approved sewage treatment plant (IV/reg 9.1.1) or a sewage comminuting and disinfecting system (IV/reg 9.1.2) need not be listed as holding tanks on the ISPP certificate. However, at owner's request, these tanks could be listed after item 1.4 as per the example below:

(1.4) A pipeline for the discharge of sewage to a reception facility, fitted with a standard shore connection.

Additional Tank:  
- located from frame XX to XX  
- capacity of XX cu.m.

The additional tank should be reviewed by engineering under sanitary systems, but does not require:

- I. a discharge connection to shore (MARPOL IV/10),
  - II. provisions to indicate visually the amount of its content,
  - III. an overboard discharge,
  - IV. its holding capacity to be approved by the administration,
- Upon satisfactory completion of initial/periodical survey, a full-term certificate shall be issued on form ISPPC. For Administrations who are not signatory to the Convention, form SoC

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SPPC, Statement of Compliance for Sewage Pollution Prevention (1973), shall be used. In light of the planned revision to introduce the HSSC scheme into MARPOL Annex IV, it is recommended that the full term ISPPC/SPPC certificate be harmonized with existing Annex I certificate for both expiry date and anniversary date. As this may result in this ISPPC/SPPC certificate having an initial validity period of less than 5 years, if the owner is not agreeable to this approach, then the harmonization need not occur at this point in time.

**REFERENCES:**

- MARPOL Annex IV

**ATTACHMENTS:** No.

Kindest Regards,

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