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UNIFIED INTERPRETATIONS OF REGULATIONS 1.24, 12, 27 AND 28.3.3 OF MARPOL ANNEX I

1 The Marine Environment Protection Committee, at its seventieth session (24 to 28 October 2016), approved unified interpretations of regulations 1.24, 12, 27 and 28.3.3 of MARPOL Annex I (MEPC 70/18, paragraphs 10.6, 17.13 and 17.27, and annex 13), as attached at annex hereto.

2 Member Governments are invited to apply the annexed unified interpretations to MARPOL Annex I and bring them to the attention of all parties concerned.

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ANNEX

UNIFIED INTERPRETATIONS OF REGULATIONS 1.24, 12, 27 AND 28.3.3 OF MARPOL ANNEX I

Regulation 1- Definitions

Lightweight

Regulation 1.24

The weight of mediums on board for the fixed fire-fighting systems (e.g. freshwater, CO_2, dry chemical powder, foam concentrate, etc.) should be included in the lightweight and lightship condition.

Regulation 12 – Tanks for oil residues (sludge)

Capacity of oil residue (sludge) tanks

Regulation 12.3.1

1 To assist Administrations in determining the adequate capacity of oil residue (sludge) tanks, the following criteria may be used as guidance. These criteria should not be construed as determining the amount of oily residues which will be produced by the machinery installation in a given period of time. The capacity of oil residue (sludge) tanks may, however, be calculated upon any other reasonable assumptions. For a ship the keel of which is laid or which is at a similar stage of construction on or after 31 December 1990, the guidance given in items .4 and .5 below should be used in lieu of the guidance contained in items .1 and .2.

.1 For ships which do not carry ballast water in oil fuel tanks, the minimum oil residue (sludge) tank capacity (V_1) should be calculated by the following formula:

$V_1 = K_1CD(m^3)$ where:

K_1 = 0.01 for ships where heavy fuel oil is purified for main engine use, or 0.005 for ships using diesel oil or heavy fuel oil which does not require purification before use;

C = daily fuel oil consumption (metric tons); and

D = maximum period of voyage between ports where oil residue (sludge) can be discharged ashore (days). In the absence of precise data a figure of 30 days should be used.

.2 When such ships are fitted with homogenizers, oil residue (sludge) incinerators or other recognized means on board for the control of oil residue (sludge), the minimum oil residue (sludge) tank capacity (V_1) should, in lieu of the above, be:

V_1 = 1 m^3 for ships of 400 gross tonnage and above but less than 4,000 gross tonnage, or 2 m^3 for ships of 4,000 gross tonnage and above.

.3 For ships which carry ballast water in fuel oil tanks, the minimum oil residue (sludge) tank capacity (V_2) should be calculated by the following formula:

$V_2 = V_1 + K_2B(\ m^3)$ where:

V_1 = oil residue (sludge) tank capacity specified in .1 or .2 above in m^3;

K_2 = 0.01 for heavy fuel oil bunker tanks, or 0.005 for diesel oil bunker tanks; and

B = capacity of water ballast tanks which can also be used to carry oil fuel (tonnes).

.4 For ships which do not carry ballast water in fuel oil tanks, the minimum oil residue (sludge) tank capacity (V_1) should be calculated by the following formula:

$V_1 = K_1CD(m^3)$ where:

K_1 = 0.015 for ships where heavy fuel oil is purified for main engine use or 0.005 for ships using diesel oil or heavy fuel oil which does not require purification before use;

C = daily fuel oil consumption (m^3); and

D = maximum period of voyage between ports where oil residue (sludge) can be discharged ashore (days). In the absence of precise data a figure of 30 days should be used.

.5 For ships where the building contract is placed, or in the absence of a building contract, the keel of which is laid before 1 July 2010, and which are fitted with homogenizers, oil residue (sludge) incinerators or other recognized means on board for the control of oil residue (sludge), the minimum oil residue (sludge) tank capacity should be:

.5.1 50% of the value calculated according to item .4 above; or

.5.2 1 m^3 for ships of 400 gross tonnage and above but less than 4,000 gross tonnage or 2 m^3 for ships of 4,000 gross tonnage and above; whichever is the greater.

2 Administrations should establish that in a ship the keel of which is laid or which is at a similar stage of construction on or after 31 December 1990, adequate tank capacity, which may include the oil residue (sludge) tank(s) referred to under 1.1 above, is available also for leakage, drain and waste oils from the machinery installations. In existing installations this should be taken into consideration as far as reasonable and practicable.

Designated pump disposal

Regulation 12.3.2

A designated pump should be interpreted as any pump used for the disposal of oil residue (sludge) through the standard discharge connection referred to in regulation 13, or any pump used to transfer oil residue (sludge) to any other approved means of disposal such as an incinerator, auxiliary boiler suitable for burning oil residues (sludge) or other acceptable means which are prescribed in paragraph 3.2 of the Supplement to IOPP Certificate Form A or B.

No discharge connection

Regulation 12.3.3

A screw-down non-return valve, arranged in lines connecting to common piping leading to the standard discharge connection required by regulation 13, provides an acceptable means to prevent oil residue (sludge) from being transferred or discharged to the bilge system, oily bilge water holding tank(s), tank top or oily water separators.

Overboard connection of oil residue (sludge) tanks

Regulation 12.3.4

Ships having piping to and from oil residue (sludge) tanks to overboard discharge outlets, other than the standard discharge connection referred to in regulation 13 installed prior to 4 April 1993 may comply with regulation 12.3.4 by the installation of blanks in this piping.

Cleaning of oil residue (sludge) tanks and discharge of residues

Regulation 12.3.5

To assist Administrations in determining the adequacy of the design and construction of oil residue (sludge) tanks to facilitate their cleaning and the discharge of residues to reception facilities, the following guidance is provided, having effect on ships the keel of which is laid or which is at a similar stage of construction on or after 31 December 1990:

.1 sufficient man-holes should be provided such that, taking into consideration the internal structure of the oil residue (sludge) tanks, all parts of the tank can be reached to facilitate cleaning;

.2 oil residue (sludge) tanks in ships operating with heavy oil, that needs to be purified for use, should be fitted with adequate heating arrangements or other suitable means to facilitate the pump ability and discharge of the tank content;

.3 the oil residue (sludge) tank should be provided with a designated pump for the discharge of the tank content to reception facilities. The pump should be of a suitable type, capacity and discharge head, having regard to the characteristics of the liquid being pumped and the size and position of tank(s) and the overall discharge time; and

.4 where any oil residue (sludge) tank (i.e. oil residue (sludge) service tank[1]) that directly supplies oil residue (sludge) to the means of the disposal of oil residues (sludge) prescribed in paragraph 3.2 of the Supplement to IOPP Certificate Form A or B is equipped with suitable means for drainage, the requirements in sub-paragraph .3 above may not be applied to the oil residue (sludge) tank.

Regulation 27 – Intact stability

1 For proving compliance with regulation 27, either sub-paragraph .1 or .2, below, should be applied:

.1 The ship should be loaded with all cargo tanks filled to a level corresponding to the maximum combined total of vertical moment of volume plus free surface inertia moment at 0° heel, for each individual tank. Cargo density should correspond to the available cargo deadweight at the displacement at which transverse KM reaches a minimum value, assuming full departure consumables and 1% of the total water ballast capacity. The maximum free surface moment should be assumed in all ballast conditions. For the purpose of calculating GMo, liquid free surface corrections should be based on the appropriate upright free surface inertia moment. The righting lever curve may be corrected on the basis of liquid transfer moments.

.2 An extensive analysis covering all possible combinations of cargo and ballast tank loading should be carried out. For such extensive analysis conditions, it is considered that:

.1 weight, centre of gravity coordinates and free surface moment for all tanks should be according to the actual content considered in the calculations; and

.2 the extensive calculations should be carried out in accordance with the following:

.1 the draughts should be varied between light ballast and scantling draught;

.2 consumables including, but not restricted to, fuel oil, diesel oil and fresh water corresponding to 97%, 50% and 10% content should be considered;

.3 for each draught and variation of consumables, the available deadweight should comprise ballast water and cargo, such that combinations between maximum ballast and minimum cargo and vice versa, are covered. In all cases the number of ballast and cargo tanks loaded is to be chosen to reflect the worst combination of VCG and free surface effects. Operational limits on the number of tanks considered to be simultaneously slack and exclusion of specific tanks should not be permitted. All ballast tanks should have at least 1% content;

[1] "Oil residue (Sludge) Service tank" means a tank for preparation of oil residue (sludge) for incineration as defined in paragraph 5.3.3 of the appendix to the annex to the 2008 Revised *Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for an integrated bilge water treatment system (IBTS)* (MEPC.1/Circ.642), as amended by MEPC.1/Circ.676 and MEPC.1/Circ.760.

.4 cargo densities between the lowest and highest intended to be carried should be considered; and

.5 sufficient steps between all limits should be examined to ensure that the worst conditions are identified. A minimum of 20 steps for the range of cargo and ballast content, between 1% and 99% of total capacity, should be examined. More closely spaced steps near critical parts of the range may be necessary.

At every stage, the criteria described in regulations 27.1.1 and 27.1.2 of MARPOL Annex I are to be met.

2 In applying θ_f, openings which "cannot be closed weathertight" include ventilators (complying with regulation 19(4) of the International Convention on Load Lines, 1966) that for operational reasons have to remain open to supply air to the engine room or emergency generator room (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship.

Regulation 28 – Subdivision and damage stability

Regulation 28.3.3

Other openings capable of being closed weathertight do not include ventilators (complying with regulation 19(4) of the International Convention on Load Lines, 1966) that for operational reasons have to remain open to supply air to the engine room or emergency generator room (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship.