TÜRK LOYDU

TL-I MPC

Interpretations of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto and its Annexes

July 2019

These interpretations are prepared by embedding related IACS Unified Interpretations. In order to have consistency, the numbering of the interpretations are kept as the same with related IACS Unified Interpretations.

Unless otherwise specified, these Rules apply according to the implementation dates as defined in each interpretation. See Rule Change Summary on TL website for revision details.

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TL- I MPC6 Calculation of the aggregate capacity of SBT

(Regulation 19.3.4)

19.3.4 The aggregate capacity of ballast tanks

On crude oil tankers of 20,000 tonnes deadweight and above and product carriers of 30,000 tonnes deadweight and above, the aggregate capacity of wing tanks, double bottom tanks, forepeak tanks and after peak tanks shall not be less than the capacity of segregated ballast tanks necessary to meet the requirements of regulation 18 of this Annex. Wing tanks or spaces and double bottom tanks used to meet the requirements of regulation 18 shall be located as uniformly as practicable along the cargo tank length. Additional segregated ballast capacity provided for reducing longitudinal hull girder bending stress, trim, etc. may be located anywhere within the ship.

Interpretation

1. Any ballast carried in localized inboard extensions, indentations or recesses of the double hull, such as bulkhead stools, should be excess ballast above the minimum requirement for segregated ballast capacity according to regulation 18.

2. In calculating the aggregate capacity under regulation 19.3.4, the following should be taken into account:

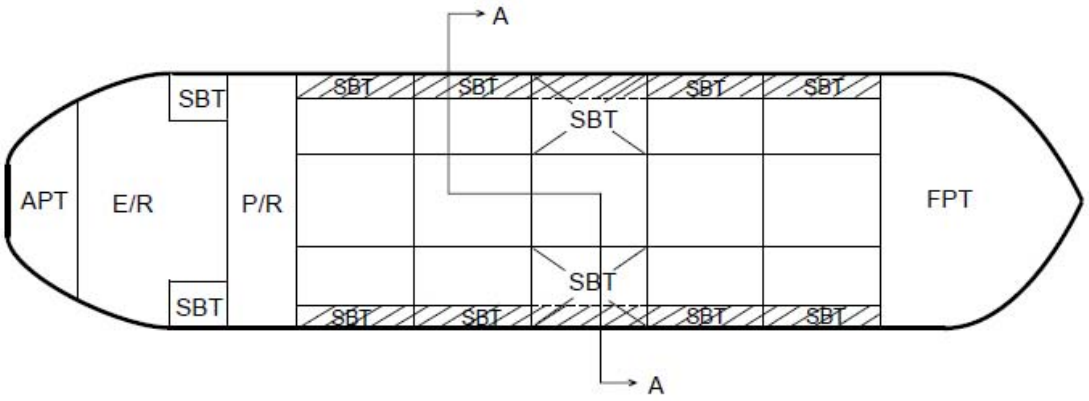
2.1 the capacity of engine-room ballast tanks should be excluded from the aggregate capacity of ballast tanks;

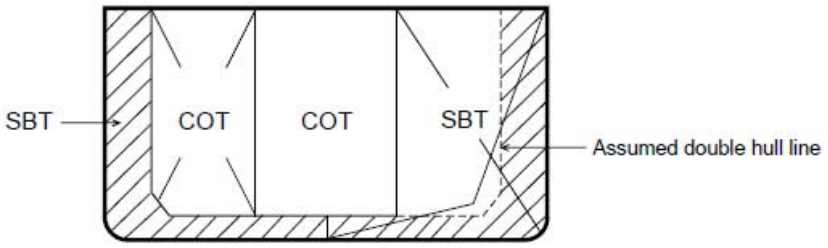
2.2 the capacity of ballast tank located inboard of double hull should be excluded from the aggregate capacity of ballast tanks (see figure 1).

Notes:

1. This interpretation is implemented for ships contracted for construction on or after 1 July 2016.

2. The “contracted for construction” date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of “contract for construction”, refer to TL- PR 29.

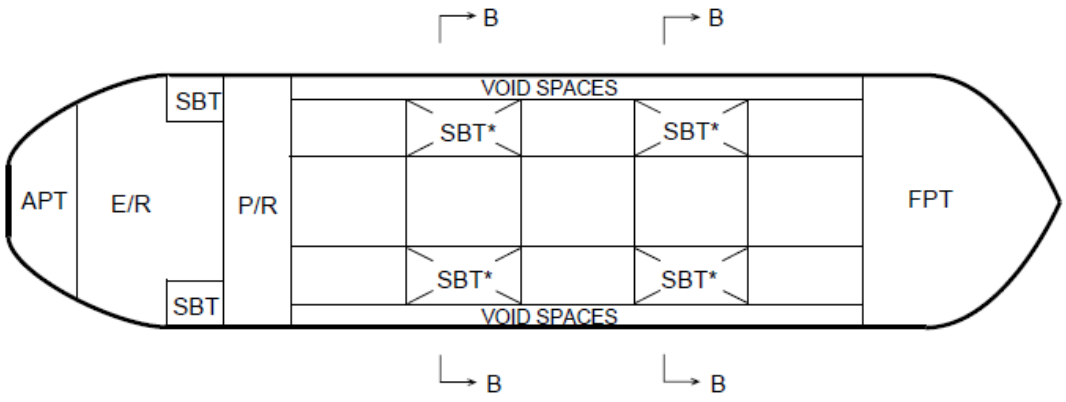


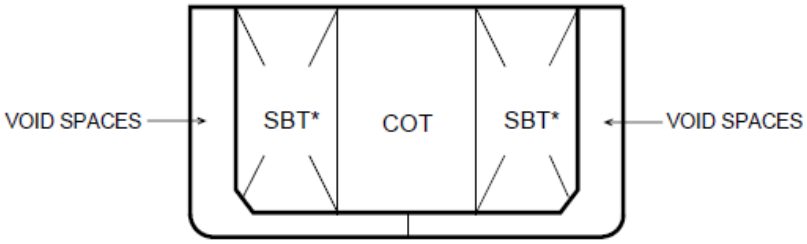


SECTION A-A

Fig. 1

2.3 spaces such as void spaces located in the double hull within the cargo tank length should be included in the aggregate capacity of ballast tanks (see figure 2).





SECTION B-B

Fig. 2

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Interpretation to MARPOL I/27

Regulation 27

Intact stability

1 Every oil tanker of 5,000 tonnes deadweight and above delivered on or after 1 February 2002, as defined in regulation 1.28.7, shall comply with the intact stability criteria specified in paragraphs 1.1 and 1.2 of this regulation, as appropriate, for any operating draught under the worst possible conditions of cargo and ballast loading, consistent with good operational practice, including intermediate stages of liquid transfer operations. Under all conditions the ballast tanks shall be assumed slack.

.1 In port, the initial metacentric height GM_o, corrected for the free surface measured at 0° heel, shall be not less than 0.15 m;

.2 At sea, the following criteria shall be applicable:

*.2.1 the area under the righting lever curve (GZ curve) shall be not less than 0.055 m.rad up to θ = 30° angle of heel and not less than 0.09 m.rad up to θ = 40° or other angle of flooding θ_f * if this angle is less than 40°. Additionally, the area under the righting lever curve (GZ curve) between the angles of heel of 30° and 40° or between 30° and θ_f , if this angle is less than 40°, shall be not less than 0.03 m.rad;*

.2.2 the righting lever GZ shall be at least 0.20 m at an angle of heel equal to or greater than 30°;

Note:

1. This interpretation is implemented on ships contracted for construction on or after 1 January 2017.

2. The damage stability requirements in MARPOL I/28 shall not apply for the purpose of demonstrating compliance with MARPOL Reg. I/27.

3. The “contracted for construction” date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of “contract for construction”, refer to TL- PR 29.

.2.3 the maximum righting arm shall occur at an angle of heel preferably exceeding 30° but not less than 25°; and

.2.4 the initial metacentric height GM_o, corrected for free surface measured at 0° heel, shall be not less than 0.15 m.

** θ_f is the angle of heel at which openings in the hull superstructures or deckhouses which cannot be closed weathertight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.*

2 The requirements of paragraph 1 of this regulation shall be met through design measures. For combination carriers simple supplementary operational procedures may be allowed.

3 Simple supplementary operational procedures for liquid transfer operations referred to in paragraph 2 of this regulation shall mean written procedures made available to the master which:

.1 are approved by the Administration;

.2 indicate those cargo and ballast tanks which may, under any specific condition of liquid transfer and possible range of cargo densities, be slack and still allow the stability criteria to be met. The slack tanks may vary during the liquid transfer operations and be of any combination provided they satisfy the criteria;

.3 will be readily understandable to the officer-in-charge of liquid transfer operations;

.4 provide for planned sequences of cargo/ballast transfer operations;

.5 allow comparisons of attained and required stability using stability performance criteria in graphical or tabular form;

.6 require no extensive mathematical calculations by the officer-in-charge;

.7 provide for corrective actions to be taken by the officer-in-charge in case of departure from recommended values and in case of emergency situations; and

.8 are prominently displayed in the approved trim and stability booklet and at the cargo/ballast transfer control station and in any computer software by which stability calculations are performed.

Interpretation

For proving compliance with Reg. I/27, either paragraph 1 or 2, below, shall be applied.

1. The vessel shall 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 shall 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 shall be assumed in all ballast conditions. For the purpose of calculating GMo, liquid free surface corrections shall 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 is to be carried out. For such extensive analysis conditions it is considered that:

(a) Weight, centre of gravity co-ordinates and free surface moment for all tanks are to be according to the actual content considered in the calculations.

(b) The extensive calculations are to be carried out in accordance with the following:

1. The draughts are to 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 are to be considered.

3. For each draught and variation of consumables, the available deadweight is to 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 are not permitted. All ballast tanks are to have at least 1% content.

4. Cargo densities between the lowest and highest intended to be carried are to be considered.

5. Sufficient steps between all limits are to 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, are to be examined. More closely spaced steps near critical parts of the range may be necessary.

At every stage the criteria described in MARPOL Reg. I/27 paragraphs 1.1 and 1.2 are to be met.

3. In applying θ_f, openings which “cannot be closed weathertight” include ventilators (complying with ILLC 19(4)) 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.

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Annex I of MARPOL 73/78 Regulation 12A as amended by Resolution MEPC.141(54)

Regulation 12A.9, as amended by Resolution MEPC.141(54), reads:

"Lines of oil fuel piping located at a distance from the ship's bottom of less than h, as defined in paragraph 6, or from the ship's side less than w, as defined in paragraphs 7 and 8 shall be fitted with valves or similar closing devices within or immediately adjacent to the oil fuel tank. These valves shall be capable of being brought into operation from a readily accessible enclosed space the location of which is accessible from the navigation bridge or propulsion machinery control position without traversing exposed freeboard or superstructure decks.
The valves shall close in case of remote control system failure (fail in a closed position) and shall be kept closed at sea at any time when the tank contains oil fuel except that they may be opened during oil fuel transfer operations."

Regulation 12A.10, as amended by Resolution MEPC.141(54), reads:

"Suction wells in oil fuel tanks may protrude into the double bottom below the boundary line defined by the distance h provided that such wells are as small as practicable and the distance between the well bottom and the bottom shell plating is not less than 0.5 h."

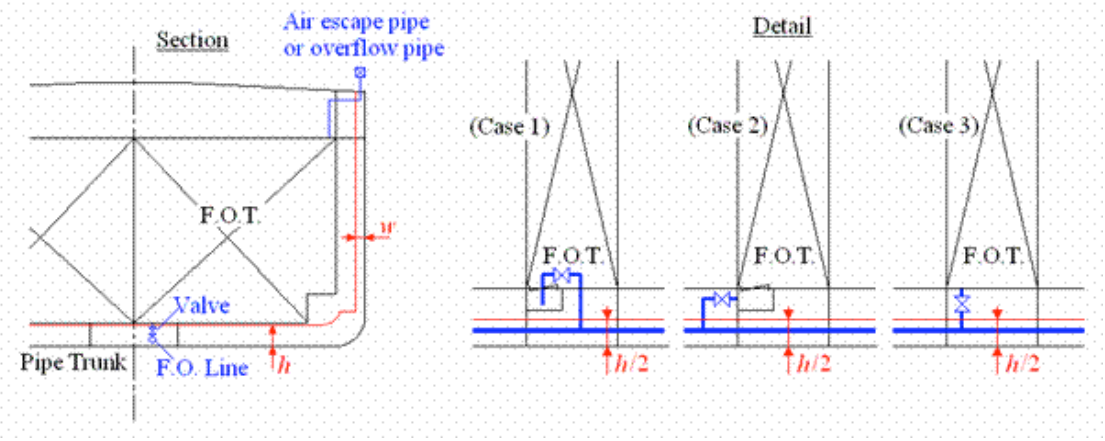
Interpretation:

1. Valves for oil fuel tanks located in accordance with the provisions of paragraphs 6, 7 and 8 of MARPOL regulation I/12A may be treated in a manner similar to the treatment of suction wells as per MARPOL regulation I/12A.10 and therefore arranged at a distance from the ship's bottom of not less than *h/2* (see the figure below).

2. Valves for tanks which are permitted to be located at a distance from the ship's bottom or side at a distance less than *h* or *w*, respectively, in accordance with the accidental oil fuel outflow performance standard of MARPOL regulation I/12A.11 may be arranged at the distance less than *h* or *w*, respectively.

3. Fuel tank air escape pipes and overflow pipes are not considered as part of *'lines of fuel oil piping"* and therefore may be located at a distance from the ship's side of less than *w*.

Note:
This interpretation is applied on ships delivered on or after 1 August 2010 as defined in MARPOL regulation I/28.9.


Section
Air escape pipe
or overflow pipe
F.O.T.
w
Valve
Pipe Trunk
F.O. Line
h
Detail
(Case 1)
F.O.T.
h/2
(Case 2)
F.O.T.
h/2
(Case 3)
F.O.T.
h/2

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MPC93

Annex I of MARPOL 73/78 Regulation 23 Accidental oil outflow performance, as amended by Resolution MEPC.117(52)

Regulation 23.7.3.2, as amended by Resolution MEPC.117(52) reads:

"The cargo level after damage shall be calculated as follows:

$h_c = \{(d_s + t_c - Z_1)(\rho_s) - (1000p)/g\}/\rho_n$"

where the overpressure *p* is defined as:

"p = if an inert gas system is fitted, the normal overpressure, in kilopascals, to be taken as not less than 5 kPa; if an inert gas system is not fitted, the overpressure may be taken as 0."

Interpretation

If an inert gas system is fitted, the normal overpressure, in KPa, is to be taken as 5 KPa.

Note:

1. This interpretation is applied on ships subject to MARPOL I, regulation 23, as amended by Resolution MEPC.117(52), which are contracted for construction on or after 1 July 2017.

2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to TL- PR 29.

TL- I

MPC99

Oil residue (sludge) tank discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators (MARPOL 73/78 Annex I Regulation 12.2)

MARPOL 73/78 Annex I (as amended by MEPC.187(59)) Regulation 12.2

2. Oil residue (sludge) may be disposed of directly from the oil residue (sludge) tank(s) through the standard discharge connection referred to in regulation 13, or any other approved means of disposal. The oil residue (sludge) tank(s):

> *.2.* ***shall have no discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators*** *except that the tank(s) may be fitted with drains, with manually operated self-closing valves and arrangements for subsequent visual monitoring of the settled water, that lead to an oily bilge water holding tank or bilge well, or an alternative arrangement, provided such arrangement does not connect directly to the bilge piping system.*

MARPOL 73/78 Annex I Unified Interpretation to regulation 12.2.2 introduced by MEPC.1/Circ.753

2 ***There should be no interconnections between the sludge tank discharge piping and bilge-water piping*** *other than possible common piping leading to the standard discharge connection referred to in regulation 13.*

Interpretation

Screw-down non-return valves arranged in lines connecting to common piping leading to the standard discharge connection required by regulation 13, to prevent sludge from discharging to the bilge system, oily bilge water holding tank(s), tank top or oily water separators, provide a means equivalent to an arrangement that has “no interconnection” or “no discharge connections” as so specified in regulation 12.2 and Unified Interpretation thereto.

It is understood that the common piping may serve only one purpose and that is to connect the discharge lines of the bilge and sludge pumps to the standard discharge connection referred to in regulation 13, or any other approved means of disposal.

NOTE

1. This interpretation is implemented from 1 July 2012.

TL- I MPC105

Gaseous emissions calculation of marine diesel engines fitted with selective catalytic reduction (SCR) systems

Resolution MEPC.198(62)

5.2.1 The calculation method in section 5.12 of the NTC 2008 is also applied to engine systems fitted with SCR. No allowance is made for the reductant solution injected into the exhaust gas stream in respect of its effect on exhaust gas mass flow rate calculation (appendix VI) or dry/wet correction factor (equation (11), paragraph 5.12.3.2.2 of the NTC 2008). The NO_x correction factor for humidity and temperature (equations (16) or (17), paragraphs 5.12.4.5 and 5.12.4.6, respectively, of the NTC 2008) should not be applied.

Interpretation

The gaseous emissions calculation method given in Resolution MEPC.198(62) paragraph 5.2.1 for Scheme A is the approach to use, it applies to both Scheme A and Scheme B certification of marine diesel engines fitted with selective catalytic reduction (SCR) systems.

Notes:

1. This interpretation is implemented from 1 January 2015.