



**Policy for the Implementation of Double Hull Oil Tanker
(According to MARPOL Annex I)**

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Subj: INTERIM GUIDANCE FOR DOUBLE HULL OIL TANKER (ACCORDING TO MARPOL ANNEX I)

Ref: International Convention for the Prevention of Pollution from ship (MARPOL), Regulation 19 Double hull and double bottom requirements for oil tankers delivered on or after 6 July 1996 & Regulation 20 Double hull and double bottom requirements for oil tankers delivered on or before 6 July 1996.

1. Purpose

This policy letter provides interim guidance to ensure that, Myanmar and other flag oceangoing Oil Tankers are double hull and double bottom, in compliance with MARPOL 73/ 78 and amendments to reference.

2. Action

Myanmar flag state Surveyors and recognized Surveyors shall use this interim guidance in the oversight of their respective Myanmar flag and foreign flag ships.

3. Directives Affected.

April 21 2014.

4. Background

MARPOL ANNEX I, REGULATION FOR THE PREVENTION OF POLLUTION BY OIL FROM SHIP. On May 4, 1988, the Republic of the Union of Myanmar was signed for the MARPOL Annex (1) & (2) and enters into force on August 4, 1988.

5. Enforcement. Myanmar flag state officers should verify a foreign flag ship’s compliance with MARPOL Annex – I during normally scheduled inspection. For Myanmar ships operating strictly on domestic routes, compliance should be verified by Myanmar Flag state Surveyors during normally scheduled inspections, but an educational outreach and

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awareness approach is encouraged. However, current enforcement options remain in place for willful and egregious violators or repeat offenders.

6. Limitation

Regulation 19

Double hull and double bottom requirements for oil tanker (delivered on or after 6 July 1996)

1 This regulation shall apply to oil tankers of 600 tonnes deadweight and above delivered on or after 6 July 1996, as defined in regulation 1.28.6, as follows:

2 Every oil tanker of 5,000 tonnes deadweight and above shall:

.1 in lieu of paragraphs 12 to 15 of regulation 18, as applicable, comply with the requirements of paragraph 3 of this regulation unless it is subject to the provisions of paragraphs 4 and 5 of this regulation; and

.2 comply, if applicable, with the requirements of regulation 28.6.

3 The entire cargo tank length shall be protected by ballast tanks or spaces other than tanks that carry oil as follows:

.1 Wing tanks or spaces Wing tanks or spaces shall extend either for the full depth of the ship's side or from the top of the double bottom to the uppermost deck, disregarding a rounded gunwale where fitted. They shall be arranged such that the cargo tanks are located inboard of the moulded line of the side shell plating nowhere less than the distance w , which, as shown in figure 1, is measured at any cross-section at right angles to the side shell, as specified below:

$$W=0.5 + \frac{DWT}{20,000} \text{ (m) or}$$

$w = 2.0$ m, whichever is the lesser.

The minimum value of $w = 1.0$ m.

.2 *Double bottom tanks or spaces*

At any cross-section, the depth of each double bottom tank or space shall be such that the distance h between the bottom of the cargo tanks and the moulded line of the bottom shell plating measured at right angles to the bottom shell plating as shown in

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figure 1 is not less than specified below:

$$h = \frac{B}{15} \text{ (m) or}$$

$h = 2.0 \text{ m}$, whichever is the lesser.

The minimum value of $h = 1.0 \text{ m}$.

.3 *Turn of the bilge area or at locations without a clearly defined turn of the bilge*

When the distances h and w are different, the distance w shall have preference at levels exceeding $1.5h$ above the baseline as shown in figure 1.

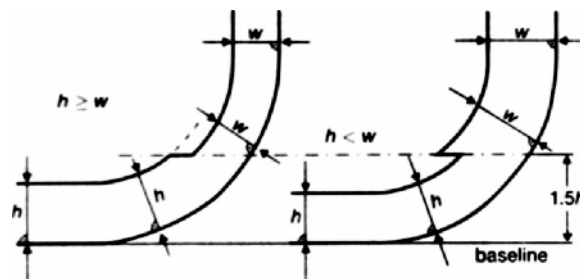


Figure 1 - Cargo tank boundary

.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.

.5 *Suction well in cargo tanks*

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

.6 *Ballast and cargo piping*

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Ballast piping and other piping such as sounding and vent piping to ballast tanks shall not pass through cargo tanks. Cargo piping and similar piping to cargo tanks shall not pass through ballast tanks. Exemptions to this requirement may be granted for short lengths fit piping, provided that they are completely welded or equivalent.

7. The following applies for double bottom tanks or spaces:

- .1 Double bottom tanks or spaces as required by paragraph 3.2 of this regulation may be dispensed with, provided that the design of the tanker is such that the cargo and vapour pressure exerted on the bottom shell plating forming a single boundary between the cargo and the sea does not exceed the external hydrostatic water pressure, as expressed by the following formula:

$$f \times h_c \times p_c \times g + p \leq d_n \times p_s \times g$$

where:

h_c =height of cargo in contact with the bottom shell plating in metres

p_c =maximum cargo density in kg/ m³

d_n =minimum operating draught under any expected loading condition in metres

p_s = density of seawater in kg/m³

p =maximum set pressure above atmospheric pressure (gauge pressure) of pressure/ vacuum valve provided for the cargo tank in pascals

f = safety factor = 1.1

g = standard acceleration of gravity (9.81 m/s²).

- .2 Any horizontal partition necessary to fulfill the above requirements shall be located at a height not less than $\frac{B}{6}$ or 6 m, whichever is *the* lesser, but not more than 0.6D, above the baseline where D is the moulded depth amidships.

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- .3 The location of wing tanks or spaces shall be as defined in paragraph 3.1 of this regulation of this regulation, except that below the level $1.5h$ above the baseline where h is as defined in paragraph 3.2 of this regulation the cargo tank boundary line may be vertical down to the bottom plating, as shown in figure 2.
- 5 Other methods of design and construction of oil tankers may also be accepted as alternatives to the requirements prescribed in paragraph 3 of this regulation, provided that such methods ensure at least the same level of protection against oil pollution in the event of collision or stranding and are approved in principle by the Marine Environment Protection Committee based on guidelines developed by the Organization.'
- 6 Every oil tanker of less than 5,000 tonnes deadweight shall comply with paragraphs 3 and 4 of this regulation, or shall:

.1

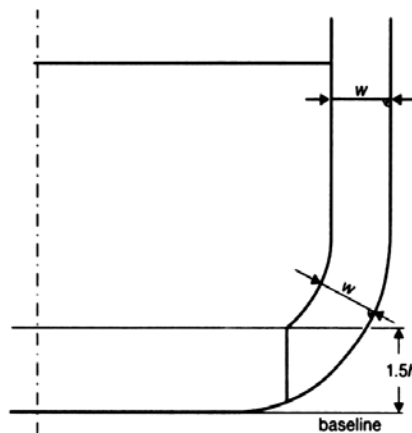


Figure 2 - Cargo tank boundary lines

at least be fitted with double bottom tanks or spaces having such a depth that the distance h specified in paragraph 3.2 of this regulation complies with the following:

at least be fitted with double bottom tanks or spaces having such a depth that the distance h specified in paragraph 3.2 of this regulation complies with the following:

$$h = \frac{B}{15} \text{ (m)}$$

with a minimum value of $h =$

0.76 m;

in the turn of the bilge area and at locations without a clearly defined turn of the bilge, the cargo tank boundary line shall run parallel to the line of the midship flat bottom as shown in figure 3; and

- .2 be provided with cargo tanks so arranged that the capacity of each cargo tank does not exceed 700 m³ unless wing tanks or spaces are arranged in accordance with paragraph 3.1 of this regulation,

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complying with the following:

$$w=0.4+2.4DW(ml)$$

20,000

with a minimum value of $w = 0.76$ m.

- 7 Oil shall not be carried in any space extending forward of a collision bulkhead located in accordance with regulation 11-1/11 of the International Convention for the Safety of Life at Sea, 1974, as amended: An oil tanker that is not required to have a collision bulkhead in accordance with that regulation shall not carry oil in any space extending forward of the transverse plane perpendicular to the centreline that is located as if it were a collision bulkhead located in accordance with that regulation.
- 8 In approving the design and construction of oil tankers to be built in accordance with the provisions of this regulation, Administrations shall have due regard to the general safety aspects, including the need for the maintenance and inspections of wing and double bottom tanks or spaces.

Regulation 20

Double hull and double bottom requirements for oil tankers delivered before 6 July 1996

- 1 Unless expressly provided otherwise this regulation shall:
 - .1 apply to oil tankers of 5,000 tonnes deadweight and above, which are delivered before 6 July 1996, as defined in regulation 1.28.5 of this Annex; and
 - .2 not apply to oil tankers complying with regulation 19 and regulation 28 in respect of paragraph 28.6, which are delivered before 6 July 1996, as defined in regulation 1.28.5 of this Annex; and
 - .3 not apply to oil tankers covered by subparagraph 1 above which comply with regulation 19.3.1 and 19.3.2 or 19.4 or 19.5 of this Annex, except that the requirement for minimum distances between the cargo tank boundaries and the ship side and bottom plating need not be met in all respects. In that event, the side protection distances shall not be less than those specified in the International Bulk Chemical Code for type 2 cargo tank location and the bottom protection distances at centreline shall comply with regulation 18.15.2 of this Annex.

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- 2 For the purpose of this regulation:
 - .1 Heavy diesel oil means diesel oil other than those distillates of which more than 50% by volume distils at a temperature not exceeding 340°C when tested by the method acceptable to the Organization.
 - .2 Fuel oil means heavy distillates or residues from crude oil or blends of such materials intended for use as a fuel for the production of heat or power of a quality equivalent to the specification acceptable to the Organization.
- 3 For the purpose of this regulation, oil tankers are divided into the following categories:
 - .1 Category 7 oil tanker means an oil tanker of 20,000 tonnes deadweight and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 tonnes deadweight and above carrying oil other than the above, which does not comply with the requirements for oil tankers delivered after 1 June 1982, as defined in regulation 1.28.4 of this Annex;
 - .2 Category 2 oil tanker means an oil tanker of 20,000 tonnes deadweight and above carrying crude oil, fuel oil, heavy diesel oil or lubricating oil as cargo, and of 30,000 tonnes deadweight and above carrying oil other than the above, which complies with the requirements for oil tankers delivered after 1 June 1982, as defined in regulation 1.28.4 of this Annex; and
 - .3 Category 3 oil tanker means an oil tanker of 5,000 tonnes deadweight and above but less than that specified in subparagraph 1 or 2 of this paragraph.
- 4 An oil tanker to which this regulation applies shall comply with the requirements of paragraphs 2 to 5, 7 and 8 of regulation 19 and regulation 28 in respect of paragraph 28.6 of this Annex not later than 5 April 2005 or the anniversary of the date of delivery of the ship on the date or in the year specified in the following table:

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Category of oil tanker	Date or year
Category 1	5 April 2005 for ships delivered on 5 April 1982 or earlier 2005 for ships delivered after 5 April 1982
Category 2 and Category 3	5 April 2005 for ships delivered on 5 April 1977 or earlier 2005 for ships delivered after 5 April 1977 but before 1 January 1978 2006 for ships delivered in 1978 and 1979 2007 for ships delivered in 1980 and 1981 2008 for ships delivered in 1982 2009 for ships delivered in 1983 2010 for ships delivered in 1984 or later

- 5 Notwithstanding the provisions of paragraph 4 of this regulation, in the case of a Category 2 or 3 oil tanker fitted with only double bottoms or double sides not used for the carriage of oil and extending to the entire cargo tank length or double hull spaces which are not used for the carriage of oil and extend to the entire cargo tank length, but which does not fulfil conditions for being exempted from the provisions of paragraph 1.3 of this regulation, the Administration may allow continued operation of such a ship beyond the date specified in paragraph 4 of this regulation, provided that:
- .1 the ship was in service on 1 July 2001;
 - .2 the Administration is satisfied by verification of the official records that the ship complied with the conditions specified above;
 - .3 the conditions of the ship specified above remain unchanged; and
 - .4 such continued operation does not go beyond the date on which the ship reaches 25 years after the date of its delivery.
- 6 A Category 2 or 3 oil tanker of 15 years and over after the date of its delivery shall comply with the Condition Assessment Scheme adopted by the Marine Environment Protection Committee by resolution MEPC.94(46), as amended, provided that such amendments shall be adopted, brought into force and take effect in accordance with the provisions of article

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- 7 The Administration may allow continued operation of a Category 2 or 3 oil tanker beyond the date specified in paragraph 4 of this regulation, if satisfactory results of the Condition Assessment Scheme warrant that, in the opinion of the Administration, the ship is fit to continue such operation, provided that the operation shall not go beyond the anniversary of the date of delivery of the ship in 2015 or the date on which the ship reaches 25 years after the date of its delivery, whichever is the earlier date. 8.1 The Administration of a Party to the present Convention which allows the application of paragraph 5 of this regulation, or allows, suspends, withdraws or declines the application of paragraph 7 of this regulation, to a ship entitled to fly its flag shall forthwith communicate to the Organization for circulation to the Parties to the present Convention particulars thereof, for their information and appropriate action, if any.
8. A Party to the present Convention shall be entitled to deny entry into the ports or offshore terminals under its jurisdiction of oil tankers operating in accordance with the provisions of:
- .1 paragraph 5 of this regulation beyond the anniversary of the date of delivery of the ship in 2015; or
 - .2 paragraph 7 of this regulation.

In such cases, that Party shall communicate to the Organization for circulation to the Parties to the present Convention particulars thereof for their information.