

# International Regulation News Update

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## Marine Environment Protection Committee's 54<sup>th</sup> Session (20 – 24 March 2006)

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## MARPOL ANNEX I

### Protection of Fuel Oil Tanks

The Committee adopted resolution MEPC.141(54) which contains the new MARPOL regulation 12A applicable to all new ships having an aggregate FO capacity  $\geq 600 \text{ m}^3$ . Each bunker tank (which excludes tanks that do not normally carry fuel oil such as overflow tanks) fitted in such ships and having a capacity (98% of the tank's gross volume) greater than  $30 \text{ m}^3$  is to be protectively located.

#### Application

New ships as defined below will be required to protect their bunker tanks:

- Building Contracted on/after 1 August 2007;
- Keel laying date on/after 1 Feb 2008 (where this is no contract); or
- Delivery on/after 1 August 2010

#### Exemptions

Self-elevating drilling jack-up drilling MODUs are exempt from the requirement for double bottom protection, but need to comply with the side protection requirements.

Only bunker tanks in column stabilized MODUs that are located within the MODU Code's extents of vertical and lateral damage need to comply with the side protection requirements; tanks outside of these extents of damage are exempt from the side protection requirements.

Only side protection requirements apply to new FPSOs/FSUs.

#### Overview

The new MARPOL regulation 12A:

- limits the size of FO tanks to not more than  $2500 \text{ m}^3$ ;
- requires FO piping contained within the effected tanks to be located above the distances indicated below unless fitted with remotely operated (fail safe) isolation valves at the tank's penetration; and
- contains two options, prescriptive and deterministic, to determine the extent of protection for fuel oil tanks.

#### Prescriptive Option (double hull protection)

A double bottom with a height not less than  $B/20$  (minimum value is  $760_{\text{mm}}$ ) or  $2_{\text{m}}$ , whichever is lesser, and a wing tank must meet the following:

- a minimum width of  $0.4 + C/20,000\text{m}$  where the minimum value is  $1.0_{\text{m}}$  or, if the tank size is  $<500_{\text{m}^3}$ ,  $760_{\text{mm}}$ , for an aggregate FO capacity of less than  $5,000 \text{ m}^3$ ; and
- a minimum width of  $0.5 + C/20,000\text{m}$  (the minimum value is  $1.0_{\text{m}}$ ) or  $2_{\text{m}}$ , whichever is the lesser, for an aggregate FO capacity of  $5,000 \text{ m}^3$ , or more.

C is 98% of the total FO capacity

#### Probabilistic Option (oil outflow assessment)

In ship types, such as container ships, where the fitting of double bottoms can be impracticable, the regulation provides an option which assesses oil outflow based on the application of probabilistic methodology and damage density functions according to the actual tank arrangement. FO density, the location of the tank relative to the side shell and the tank size are used to determine mean oil outflow considering 40% outflow due to side damage, 60% outflow due to bottom damage and a percentage of oil entrapped by tanks bounding the bottom shell plating.

#### Clarification of Pump Room Protection

Regulation 22 requires cargo pump rooms in all oil tankers  $\geq 5000 \text{ dwt}$  with keels laid on/after 1 January 2007 to be provided with a double bottom having a height above baseline of at least  $B/15$  or  $2.0$  meters, whichever is the lesser, with a minimum value of  $1$  meter. This is to allow for cargo transfer/lightering in the event of grounding and damage in way of the pump room. If the flooding of the pump room does not render ineffective the cargo pump and, if located within the cargo pump room, ballast pump capabilities (e.g., submersible deep-well cargo and, where appropriate, ballast pumps), then a double bottom need not be fitted.

Referring to Figure 1, pump rooms located in tankers with gondola sterns need not be fitted with double bottoms where the distance of the bottom shell above baseline is not less than the minimum required double bottom height.

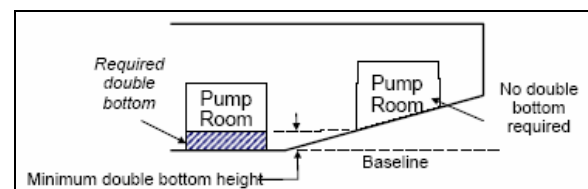


Figure 1 – Pump Room Protection

The Committee agreed to a new Unified Interpretation which clarifies that the application of new MARPOL regulation 22 is limited to cargo pump rooms. As worded, the regulation can be read to apply to ballast pump rooms. The new Interpretation also clarifies that the double bottom tank can be a void tank, a ballast tank or, unless prohibited by new MARPOL regulation 12A, a fuel oil tank.

#### **Application of MARPOL Annex I to FPSOs**

Amendments to the Guidelines for Application of the Revised MARPOL Annex I to FPSOs and FSUs (MEPC.139(53)) were adopted and are contained in resolution MEPC.142(54).

These amendments clarify:

- that the side protection requirements of fuel oil tanks under regulation 12A applies to new purpose built FPSOs/FSUs (bottom protection is not required). Existing units are exempted;
- that a contingency plan developed accordance with OPRC Art 3(2) may be accepted as meeting the requirements for a SOPEP, including disconnectable FPSOs/FSUs provided that plan remains applicable when the FPSO/FSU is not connected to the riser;
- that access to computerized shore-based programs that can readily assess the tankers damage stability and residual structural strength applies to FPSOs/FSUs  $\geq$  5000 dwt and compliance is required, as it is for oil tankers, under regulation 37 by 1 January 2007.

#### **Integrated Bilge Water Treatment Systems**

The Committee approved the Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes for an integrated bilge water treatment system (IBTS) as contained in MEPC/Circ.511.

IBTS is a system which minimizes the amount of the oily bilge water generated in machinery spaces by separating clean drains (e.g., condensate drains which can be discharged directly overboard independent from the system used for oily bilge water) from oily bilge water while providing an integrated means to process the oily bilge water and oil residue (sludge).

## **MISCELLANEOUS**

### **Prototype Ballast Treatment Technologies**

The Committee adopted resolution MEPC.140(54) which contains G10 guidelines for the approval of prototype ballast water treatment technologies that have the potential of meeting or exceeding the biological ballast water performance standard in regulation D-2 of the BWM Convention.

If prototype technologies are evaluated onboard a ship prior to date that the ship is to comply with the biological standard in regulation D-2, such tests are allowed to proceed for five years after the date the ship is to comply with the D-2 standard. If prototype technology is evaluated onboard a ship after the date that the ship is to comply with the biological standard in regulation D-2, the D-2 standard ceases to apply to that ship five years after the date of installation of such technology.

After evaluation of the technology and the testing program and upon successful completion of the installation survey, a Statement of Compliance is issued by the Administration. The Administration should ensure that the approved program is properly implemented and consistently operated within its design parameters.

### **MARPOL Annex IV - Sewage**

MARPOL Annex IV on the prevention of pollution by sewage, which entered into force on 27 September 2003, was amended by resolution MEPC.143(54). The amendments provide port State control officers with the authority to detain ships where clear grounds have been established for believing that the master or crew are not familiar with the essential shipboard procedures relating to sewage treatment and retention and to the legal discharge of treated sewage where permitted by MARPOL Annex IV.

### **Transport of Veg-Oils in General Cargo Ships**

The Committee recognized that some vegetable oils have been re-evaluated and identified as presenting both a pollution, and from an operational standpoint, a safety hazard. As a consequence, the Guidelines for the Transport of Vegetable Oils in General Cargo Ships (MEPC.120(52)) was revised and published as resolution MEPC.148(54).

This new revision still allows the carriage of vegetable oil in bulk in deep tanks or independent tanks of general dry cargo ships provided the tanks are located at least 760 mm from the shell plating and the transport is restricted to specifically identified trades. However, unmodified vegetable oils (primarily triglycerides) with a safety/pollution (S/P) notation in column *d* of chapter 17 of the amended IBC Code are permitted to be carried in such tanks. Previously, only a pollution hazard (P) had been permitted.

#### Alternative Stability Assessment Method

The Committee approved a new Unified Interpretation for determining compliance with MARPOL regulation I/25A. As an alternative to the otherwise extensive analysis carried out for all possible combinations of cargo and ballast tank loading, the new Interpretation provides a method to accomplish this in a more efficient manner. The Interpretation recommends that:

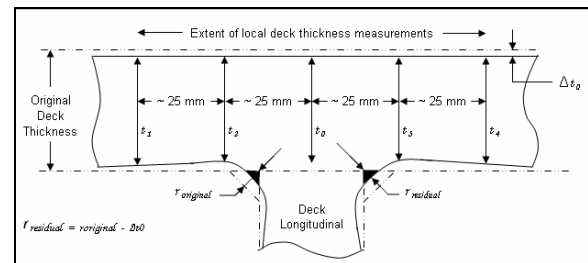
- drafts are to be varied between light ballast and scantling drafts with maximum ballast and minimum cargo and vice versa using the worst combination of KG and free surface;
- consumables should be varied at 10%, 50% and 97% of their capacity; and
- cargo densities are to cover the lowest and highest densities of cargo intended to be carried.

#### Assessment of Fillet Welds

The Committee adopted resolution MEPC.147(54) which contains guidelines for implementing a voluntary method to assess the integrity of fillet welds between the main deck

plating and deck longitudinals. At this point in time, the method does not replace the required close-up surveys and traditional method of determining the throat thickness of these fillet welds.

Referring to Figure 2, when the estimated residual throat thickness is  $\leq 0.0$  renewal of the weld should be considered based on close-up surveys. The residual throat thickness is the difference between the original thickness and the average diminution of the deck thickness in way of the weld. Accordingly, this method assumes that the main deck diminution in way of the weld is equal to the diminution of the fillet weld throat thickness. Because there has not been sufficient data made available to statistically justify if this relationship exists, the guidelines are applied on a voluntary basis.



**Figure 2 – Fillet Weld Assessment Method**

The Guidelines also contain recommendations for determining detachment of deck longitudinals from the main deck plating by determining whether or not an ultrasonic echo occurs (signifying detachment) or not (signifying structural integrity).

*Note - For further information concerning the above information, please contact ABS Regulatory Affairs at :  
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