

# International Regulation News Update

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## Marine Environment Protection Committee's 56<sup>th</sup> Session (9 – 13 July 2007)

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<p>( All Ships includes all marine craft including barges, drill rigs, submersibles, and floating platforms)</p>	

The 56<sup>th</sup> session of the Marine Environment Protection Committee met in London from 9 to 13 July 2007 under the Chairmanship of Mr. A. Chrysostomou of Cyprus. The following provides a summary of matters progressed.

## BALLAST WATER MANAGEMENT

### Entry Into Force of the BWM Convention

One of the primary tasks before this session of the MEPC was to complete its assessment of the Ballast Water Management (BWM) Convention to determine if there were any impediments to the entry into force provisions which require approximately 540 ships (with a ballast capacity < 5000 m<sup>3</sup> that are estimated to be constructed in 2009) to treat ballast water to comply with the biological standard contained in regulation D2.

As noted during earlier sessions of the MEPC, the most significant impediment has been the lack of availability of BW treatment systems that have been tested (ashore and onboard) and type approved in accordance with the G8 Guidelines contained in resolution MEPC.125(53). The above impediment is likely to have been the cause of why only 10 States, representing 3.42% of the world merchant fleet tonnage, have ratified the BWM Convention to date. This is far less than the required 30 States representing 35% of the world merchant fleet tonnage needed for the Convention to enter into force.

At this point in time, the one problem that the Committee agreed on is that ships built on/after 1 January 2009 would be required to comply with the Convention when traveling to, or within the jurisdictional waters of, States that have ratified the Convention. The extent of retroactivity of the 1 January 2009 compliance date for ships flying the flag of non-signatory States remains unknown at this time. IMO Legal Division advised that if the conditions for entry into force are not met by 31 December 2007, then the Convention would only enter into force after 1 Jan 2009 which would shift the first application date of D-2 standard (1 January 2009) to the date of entry into force of the Convention. Consequently, ships constructed between 1 January 2009 and the date of entry into force would not be required to meet the regulation D-2 standard until 2014 or 2016 according to their ballast water capacity as specified in the Convention.

Several States (including Norway, Germany, Japan and USA) disagreed with the above view. With no agreed position on the extent of retroactivity and without any approved technologies available, the proper course of action for industry to take is not clear at all.

### First BWT System Granted Approval

Under the provisions of the G9 Procedures for Approval of Systems which use Active Substances adopted by MEPC.126(53), the Committee agreed with the assessment carried out by the GESAMP BW Working Group and granted both Basic Approval and Final Approval to the PureBallast system. This system, which makes use of active substances, will now undergo further testing including an assessment of ship and crew safety before the Norwegian Administration grants Type Approval under the provisions of the G8 Guidelines. Two other systems that were submitted for review were found deficient at this point in time and were not granted either Basic or Final Approval.

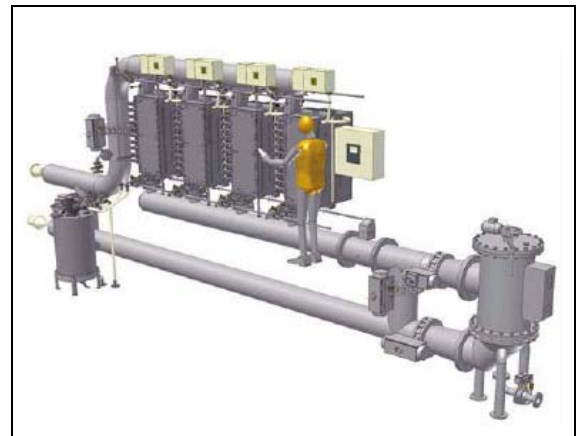


Figure 1 - PureBallast BWT System

The PureBallast system (see Figure 1) is comprised of a 50 µm filter (with automatic back flushing capability) for removing larger particles and organisms which reduces the level of sediments in the ballast water tanks and a Wallenius AOT (Advanced Oxidation Technology) Unit. This unit introduces UV-energy together with catalysts in order to produce short-lived free radicals which react with and destroy microorganisms. There are no chemicals added and there are no chemicals formed which can enter the ballast tanks. Full scale testing for type approval is set to be performed with a flow rate 250 m<sup>3</sup>/h and with a power consumption of 64 kW.

Due to the uncertainty that arose in the review of the PureBallast system with respect to “*active substances*” produced during the treatment process, interim measure were agreed until the G8 Guidelines can be revised, which request Administrations to require that manufacturers developing BWT Systems that only use physical processes which may produce chemical by-products, to utilize the relevant guidance and testing provisions for eco-toxicology, human health and ship and crew safety that are included in the G9 Procedure as part of the G8 Guidelines for Type Approval.

#### **Guideline for Requiring Additional Measures**

The Committee adopted a new resolution which contains the G13 Guideline that provides the basis for a State, after consulting with adjacent States, to implement additional measures regarding ballast water management, including measures for emergency situations, to prevent, reduce or eliminate the transfer of harmful aquatic organisms and pathogens under the provisions of regulation C-1 of the BWM Convention. In so doing, the State should endeavor to make available all appropriate services for ships to facilitate their compliance.

The locations affected by the additional measures are to be defined by precise coordinates. Any operational and/or technical requirements applicable to the ship to achieve compliance with, and the duration of, the additional measures are to be defined. Regulation C-1 contains two procedures for introducing additional measures: one requires IMO approval prior to implementation, and the other requires IMO notification six months prior to implementation except in the case of an emergency (e.g., harmful algal blooms) which can be implemented without delay.

#### **Ballast Water Exchange in Antarctic Waters**

The Committee adopted Guidelines which provide common guidance for all vessels undertaking ballast water exchange in Antarctic waters. The Guidelines call for ballast that will be discharged in Antarctic waters to first be exchanged before arrival in Antarctic waters (preferably north of either the Antarctic Polar Frontal Zone or 60°S, whichever is the furthest north) and at least 200 nmi from the nearest land in water at least 200m deep. If this is not operationally possible then such exchange should be undertaken in waters at least 50 nmi

from the nearest land in water at least 200m deep. Only those tanks that will be discharged in Antarctic waters would need to undergo ballast water exchange. Ballast water taken onboard from Antarctic waters which are intended to be discharged in Arctic, sub-Arctic, or sub-Antarctic waters should be exchanged north of the Antarctic Polar Frontal Zone, and at least 200 nmi from the nearest land in water at least 200m deep. Vessels that have spent significant time operating in the Arctic, should preferably discharge ballast water sediment and clean their tanks before entering Antarctic waters (south of 60°S).

### **SHIP RECYCLING**

#### **Draft Convention**

Slow progress was made on the draft Ship Recycling Convention during MEPC 56. Although priority is now given to complete the draft of the Convention for a diplomatic conference tentatively set for April 2009, there remain several significant unresolved issues.

- It remains unclear as to the extent to which the Convention will allow coastal State to impose more stringent requirements on foreign flag ships than that contained in the draft Convention.
- No agreement was achieved on text to ensure that a new IMO Convention would not inadvertently place governments in a position where they must deal with inconsistent international obligations between applicable ILO and IMO Convention requirements.
- Although a majority of the group agreed that the Convention should not apply to ships which have exclusively operated within the waters of a State and which are recycled within that same State, there was no agreement on how such ships are to be exempted. Concerns focus on possible loopholes being introduced by proposed text which can circumvent the requirements.
- A proposed compliance mechanism to assist implementation of Parties that are recycling States but whose facilities might not be in compliance with the requirements of the Convention remains to be resolved. Concerns focus on the ability to recycle ships in facilities located in non-Party States.

- Agreement was not achieved on the need for the Convention to require a contract or agreement between the shipowner and Ship Recycling Facility.

A small, but notable, bit of progress was that the Committee agreed to use the word "*marine*" in lieu of "*aquatic*" in the definition of vessel operation and thereby exclude inland waterway vessels from the application of the new Convention.

An intersessional working group, hosted by France in January 2008, is set to continue discussion of the above issues and concerns.

### **Convention Guidelines for Implementation**

With priority given to completing the draft Convention, the six identified guidelines addressing the following issues were not further developed during MEPC 56 from their draft condition which has led to some inconsistency relative to the Convention,

- Developing an Inventory of Hazardous Materials
- Survey and Certification
- Inspection of Ships
- Authorization of Ship Recycling Facilities
- Safe and Environmentally Sound Ship Recycling
- Development of the Ship Recycling Plan

IACS continues to be particularly keen on progressing developments of the Guidelines for Survey and Certification. The current draft of the Guidelines calls for a slightly different approach to be used for existing ships than for new ships.

Developing the Inventory List of Hazardous Materials for new ships is primarily dependent on material declarations from the ship, vendors and equipment manufacturers whereas existing ships require hazardous material experts to carry out documentation review, visual checks and, where confirmation is not achieved, sampling of material.

For new and existing vessels, the Administration or Recognized Class Society will need to carry out visual inspections to prepare the ship for recycling and to facilitate the development of a Ship Recycling Plan which is to be prepared by the recycling facility.

## **MISCELLANEOUS**

### **ISM Guidance**

The MEPC issued two Circulars which aim to strengthen the operational implementation of the ISM Code. Subject to approval by the MSC in October 2007, these Circulars place greater emphasis on performing internal annual audits and internal system reviews by qualified persons. Greater focus is also placed on the SMS review/assessment by the Company and the master who should take into account reporting and analysis of non-conformities, accidents and hazardous occurrences.

Recognizing that a key role in implementing the ISM Code is played by the Designated Person Ashore, DPA, a second Circular provides qualifications, training and experience for the DPA. The Circular recommends formal education from a tertiary institution within a relevant field of management, engineering or physical sciences. Alternatively, seagoing experience as certified ship's officer or formal education with three years practical experience at a senior ship management level are also acceptable.

### **Oily Water Separators**

The United States proposed a mandatory phase-out, over a five year period, of oily water separators and oil discharge monitoring systems that do not comply with the new standards contained resolutions MEPC.107(49) and MEPC.108(49).

While there was little support for the proposal, many expressed support for the upgrading of equipment and compliance with agreed maintenance standards, but the five year timeframe was judged to be too early given that the new standards were recently applied to equipment installed on ships on/after 1 January 2005.

MEPC tasked the DE Sub-Committee to examine the practicalities and time scale for the proposed phase-out which would affect approximately 45,000 ships worldwide and to consider the possible upgrading of existing equipment. The development of an appropriate standard addressing in-service maintenance issues for all pollution prevention equipment will also be considered.

### AFS Convention

MEPC 56 was advised that Slovenia and Panama have ratified the Anti-fouling System (AFS) Convention. As such, conditions for entry into force (25 States with 25% gt) have been met. Ratification has been received from Slovenia and 12 months after IMO receives the official ratification from Panama (which is expected in the next few weeks), the AFS Convention will enter into force.

AFS applies to ships (excluding fixed or floating platforms, FSUs, and FPSOs) of 400 gt and above engaged on international voyages. Annex 1 of the AFS Convention prohibits certain types of anti-fouling systems and requires removal or application of a sealer coat using an uncontrolled AFS (one that does **not** appear in Annex 1). It is however noted that in the event a vessel is registered in a EU Member State or intends to trade within EU waters, compliance with the AFS Convention is required by 1 January 2008.

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## AMENDMENTS/INTERPRETATIONS

### Revised Survey Guidelines

The MEPC approved revised survey guidelines which impact the dry docking frequency for passenger ships less than 15 yrs of age and the initial surveys to be carried out for Liquid Natural Gas (LNG) carriers. If MSC 83 concurs in October with the MEPC-approved guidelines, the revision will go forward to the 24<sup>th</sup> Assembly in December 2007 for adoption.

In water examination of passenger ship's bottom was revised to provide a universal approach to the frequency of examination recognizing that all flag States have their own unique procedures. It was agreed that as a minimum, two of the inspections of the outside of the passenger ship's bottom during the 5-year period of validity of the Load Line Certificate should be conducted in dry-dock. In all cases, the maximum interval between any two dry-dock bottom inspections should not exceed 36 months. Inspections of the ship's bottom required for the renewal survey that are not conducted in dry-dock may be carried out by suitably qualified personnel with the ship afloat provided conditions are satisfactory and the proper equipment is available. Special consideration should be given to ships of 15 years of age or over before applying the above practice.

The second substantive revision concerns the initial survey of LNG carriers. IACS has become aware of leaking secondary barriers which has occurred on some vessels after delivery causing these vessels to be removed from service for repair. This has occurred for certain ships that were insulated with a secondary barrier fabric that is rolled out and glued during a labor- and procedurally-intensive effort that is needed to join the 1.5 m<sup>2</sup> prefabricated panels. After investigation, IACS concluded that the breakdown occurred due to the insulation's secondary bonding system contracting after initial cool-down. The Committee agreed with the IACS proposal for the secondary barrier (even though it was satisfactorily tested prior to initial cool-down during gas trials) to be tightness tested after initial cool-down.

### Carriage of VegOils in Chemical Carriers

In response to several papers submitted to MEPC 56 expressing concern on the inconsistent implementation of MARPOL Annex II, regulation 4.1.3, particularly through the port State control, the Committee clarified the provisions of this regulation which provides exemptions for the carriage vegetable oils in chemical carriers.

MEPC 56 recognized that MARPOL II, regulation 4.1.3, was developed to accommodate a possible shortage of Ship Type (ST) 2 chemical carrier tonnage for the carriage of vegetable oils. The carriage requirements for vegoils had been upgraded to ST2 by the revised MARPOL Annex II and the IBC Code, which became effective on 1 January 2007. Regulation 4.1.3 allows an Administration to exempt ships from the ST2 cargo carriage requirements when carrying identified vegetable oils (indicated with "2K" in column "e" of IBC Code Chapter 17) provided the ship complies with the ST3 requirements of the IBC Code and is arranged with double hulls that protect the entire cargo block length and comply with the minimum dimensions required for Type-2 chemical tankers (760<sub>mm</sub> wing tank width and B/15 or 2<sub>m</sub>, whichever is lesser but not < 1<sub>m</sub>).

Some Delegates viewed that the exemption provisions would allow an Administration to exempt just one of the ST2 carriage requirements (in particular, the requirement which limits the amount of ST2 cargoes to 3000m<sup>3</sup> per tank) for a ST2 chemical tanker.

Opposing views took a more literal reading of the regulation in that when an exemption is provided, all (as opposed to some) of the carriage requirements (operational and hardware) must be exempted in which case the ship could not be a ST2 chemical carrier, but must be a ST3 chemical carrier.

After a lengthy discussion, the Committee agreed that allowing the carriage of any cargo, including vegetable oil, in excess of the 3,000 m<sup>3</sup> operational limit on a ST2 chemical carrier is in violation MARPOL Annex II and would distort competition and penalize the owners that are fully compliant. It was however recognized that downgrading the certification from ST2 to ST3 for the purpose of carrying more than 3000 m<sup>3</sup> of vegetable oil per tank was, in itself, not a violation of MARPOL Annex II.

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## AIR POLLUTION

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### Group of Expert Study

The MEPC and the BLG Subcommittee have been evaluating air pollution issues for the last two years. The principal areas being evaluated are:

- NO<sub>x</sub> emission limits for new engines, Reduction of SO<sub>x</sub> emissions
- Reduction of Volatile Organic Compounds (VOCs)
- Emission of Particulate Matter (PM)
- NO<sub>x</sub> and PM limits for existing engines.

Progress has been slow and numerous options for each of the above areas have been identified in trying to substantially minimize air pollution from all possible marine sources. In order to achieve this goal in a balanced and efficient manner and to facilitate the Committee's goal to develop practicable, workable and affordable solutions, IMO's Secretary General proposed that an Informal Cross Government/Industry Scientific Group of Experts be convened under the chairmanship of the UK. Three meetings have been scheduled (Sept., Nov. and Dec.) with a view that a report would be submitted to the BLG Sub-Committee meeting in February 2008.

The study will not aim at promoting any particular position, but will gather, evaluate and present facts to specifically address the effects of the proposed fuel options to reduce SO<sub>x</sub> and PM emissions generated by shipping, as well

asses the consequential impact such emission reductions may have on other pollutants (e.g. CO<sub>2</sub>). Selection of the limited number of participants on the study with appropriate expertise on matters within its terms of reference has not been finalized.

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### MARPOL Annex VI Revision Update

MEPC 56 extended the schedule to complete the revision of MARPOL Annex VI by one year and agreed to the holding of an intersessional meeting of the BLG Air Pollution Working Group which is to be hosted by Germany.

The work of this intersessional meeting will be sent to the BLG Sub-Committee meeting (February 2008) for review together with the results from the Informal Cross Government/Industry Scientific Group of Experts.

If approved by the BLG S/C, the proposed revisions would be sent to MEPC 57 (31 March - 4 April 2008) for consideration and approval thereby allowing for adoption of any new or revised regulation to occur at MEPC 58(6-10 Oct 2008).

The more substantial tasks are:

- *Finalize the draft proposals for Tier II and Tier III NO<sub>x</sub> regulations for new engines.* The current MARPOL VI regulation 13 comprises Tier I. Tier II represents the best available in-engine technology, with potential reductions of 15% to 25% depending on engine type and has a tentative implementation date of 1 January 2011. Tier III, with a tentative implementation date of 2015 or 2016, would introduce more stringent limits requiring further engine development or the use of different after-treatment techniques. A geographically based approach is also under consideration for Tier III.
- *Examine the feasibility of establishing NO<sub>x</sub> regulations for existing (pre-2000) engines and develop a draft simplified certification scheme for existing engines as a new chapter to the NO<sub>x</sub> Technical Code.* In this regard, the Committee was informed that the Swedish shipping industry has gained substantial experience in successfully retrofitting after-treatment technologies to existing engines and achieved significant NO<sub>x</sub> reduction.

- Consider definition and measurement methods of possible emission limits for PM and implementation of possible PM limits for new and existing engines. Substantial work remains, particularly in examining the feasibility to introduce retrospective regulations for existing engine.
- Review and finalize, if possible, draft wastewater criteria for Exhaust Gas-SOx Cleaning Systems (EGCS-SOx). Recognizing that this is new technology under development for marine applications, relatively simple criteria were developed to protect the marine environment while also allowing progress in development of this new technology. A draft set of wastewater criteria was developed addressing oil (using polycyclic aromatic hydrocarbons as an indicator), pH, heavy metals, and nitrates. Separate criteria for pH are proposed for operation in ports, harbors, and estuaries - where the greatest concern has been placed) - and while underway recognizing that damage to the ship's anti-fouling system could occur as a result of highly acidic discharges along the ship's hull.
- Review the draft amendments to the Guidelines for On-board Exhaust Gas-SOx Cleaning Systems (MEPC.130(53)) and finalize the draft amended Guidelines. The draft guidelines represent a significant improvement in organization and format over the current guidelines and were considered close to finalization.

### Green House Gas (GHG) Study

MEPC 56 recalled its tentative agreement at its last session to update the 2000 IMO GHG Study in order to give a better foundation for future decisions and to take into account significant changes in the world's shipping industry and global developments that have taken place since the 2000 Study. Despite some reservations that no new mechanisms for reduction of GHG from shipping have been developed since the 2000 study, it was agreed that the update should be carried out.

The Committee therefore revised its schedule for completing the update of its 2000 GHG Study which is now set to be completed no later than 2010. The study will entail an updating of the current inventories and future scenarios of emissions of GHGs and other relevant

substances from international shipping in order to assess climate change and future emission reduction potential.

Although carbon dioxide (CO<sub>2</sub>) is the most significant GHG emitted by ships, the study will also assess methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). Other relevant substances include nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOC), carbon monoxide (CO), particulate matter (PM) and sulphur oxides (SOx).

### Average Sulphur Content in Fuel Oil

The results of the ongoing sulphur monitoring program were reported for 2006 and established the average sulphur content at 2.59% - a reduction from 2.70% for 2005. It was reasoned that the decrease could be attributable to ships taking on board smaller quantities of low sulphur fuel for consumption within the Baltic SECA (Sulphur Emission Control Area) which entered into force in May 2006 and the fact that the average sulphur content is calculated on the basis of the number of samples tested and not the actual quantity of fuel oil bunkered. This suggests that the reduction was due to an increased number of low sulphur samples and not that the global average has decreased. The three year rolling averages are summarized in Table 1, below. IMO's Guidelines stipulate that, if in any given year, the three year rolling average exceeds the reference value (2.70 %) by 0.2%, the Committee should consider the need for further measures to reduce SOx emissions from ships. This had not happened in 2006 and the Committee agreed that no further action was needed.

Year	Annual Average	3-Year Period	3-Year Rolling Avg
1999	2.7 %		
2000	2.7 %		
2001	2.7 %	1999-2001	2.70 %
2002	2.6 %	2000-2002	2.67 %
2003	2.7 %	2001-2003	2.67 %
2004	2.7 %	2002-2004	2.67 %
2005	2.7 %	2003-2005	2.70 %
2006	2.59 %	2004-2006	2.66 %

Table 1 – Average Sulphur Content

*Note - For further information concerning the above information, please contact ABS Regulatory Affairs at : tel 201-226-5320 | fax 201-226-5314 | email: gshark@eagle.org*