

The IMO Marine Environment Protection Committee (MEPC) held its 71<sup>st</sup> session from July 3 to 7, 2017. This Brief provides an overview of the more significant issues progressed at this session. A full report of the meeting will be included in the next ABS International Regulatory News Update.

## Ballast Water Management

### BW Management Convention – Revised Implementation Scheme

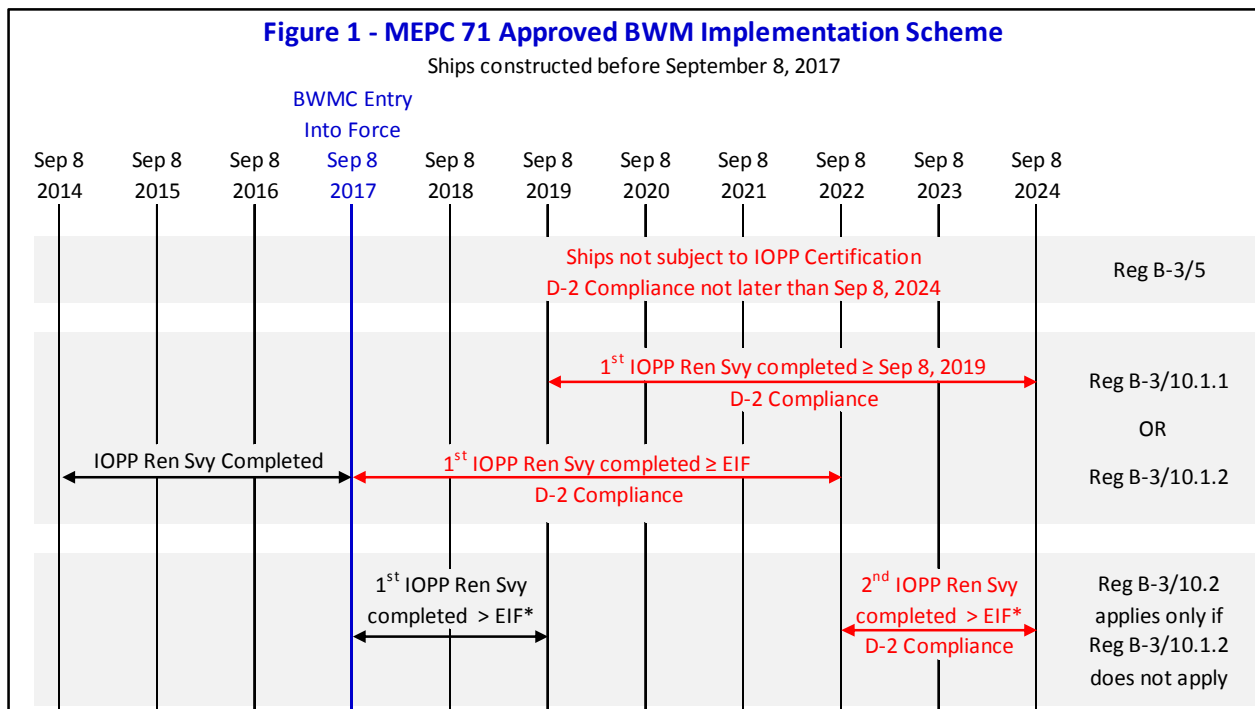
The Committee approved a resolution containing a revised implementation scheme for ships to comply with the D-2 biological standard under the BW Management Convention. The revised scheme will be considered by Member States for adoption at MEPC 72 which is scheduled from April 9 -13, 2018.

Under the approved scheme, ships constructed on or after September 8, 2017 are to comply with the D-2 standard on or after September 8, 2017. Referring to Figure 1, below, ships constructed before September 8, 2017, are to comply with the D-2 standard at the first MARPOL IOPP renewal survey completed on or after:

- September 8, 2019 (Reg B-3/10.1.1); or
- September 8, 2017, in the event a MARPOL IOPP renewal survey is completed during the period on or after September 8, 2014 and prior to September 8, 2017 (Reg B-3/10.1.2).

If the survey per Reg B-3/10.1.2 is not completed, then compliance with the D-2 standard is required at the second MARPOL IOPP renewal survey after September 8, 2017, only if the first MARPOL IOPP renewal survey after September 8, 2017 is completed prior to September 8, 2019 and a MARPOL IOPP renewal survey was not completed during the period on or after September 8, 2014 and prior to September 8, 2017 (Reg B-3/10.2).

For ships constructed before September 8, 2017 and which are not subject to the MARPOL IOPP renewal survey, compliance with the D-2 standard is required not later than September 8, 2024 (Reg B-3/5).



The resolution containing the revised implementation scheme is accompanied by an additional resolution which revokes the earlier implementation scheme as per resolution A.1088(28) and recommends that all parties acknowledge the revised implementation scheme until such time as it officially enters into force which is anticipated to be in September 2019.

### Ballast Water Treatment System (BWTS) Approvals

Final Approval was granted by the Committee for *ECS-HYBRID™* BWTS developed by TECHCROSS Inc., as submitted by the Republic of Korea in MEPC 71 /4/1. The system employs automatic back-flushing filtration (40 µm), disinfection with UV irradiation and photo-catalytic oxidation and an electrochemical generator unit to produce the Active Substance on ballast water uptake. The maximum TRO dose is 15.0 mg Cl<sub>2</sub>/L.

Basic Approval was granted by the Committee to:

- *Envirocleanse inTank™* BWTS LLC, USA, as submitted by Norway in MEPC 71/4/2. Electrochemical activation generates hypochlorous acid which is dosed as an Active Substance into ballast water after uptake. Monitoring of residual oxidant levels of ballast water occurs during carriage in tanks, to prevent organism regrowth, and prior to discharge to ensure appropriate amounts of sodium thiosulfate are introduced to neutralize any remaining oxidant.
- *MICROFADE II* BWTS submitted by the Netherlands in MEPC 71/4. This System consists of Filtration Unit having a nominal filter mesh of 40 microns which is determined as a result of layers of polyolefin fibers that undergo periodic air backwashing during the filtration process; a Chemical Unit which sterilizes filtered water by an aqueous solution of sodium dichloroisocyanurate dihydrate (SDCC); and a Main Control Unit which measures data, such as reading of the TRO concentration and flow/feeding rates, and includes as well as all the alarms (caution and warning), are recorded in the log.

### Ballast Water Exchange

A new circular was approved addressing ships operating in sea areas where Ballast Water Exchange, in accordance with regulations B-4.1 and D-1, is not possible to be carried out. Where voyages in such areas are geographically constrained, ships should record the reason why an exchange was not conducted, but are not expected to treat ballast water to meet the D-2 performance standard unless so required by the implementation scheme as per regulation B-3.

Additionally, the Committee adopted revised G6 Guidelines for Ballast Water Exchange which includes an updated example of a ballast water reporting form.

### Code for Approval of Ballast Water Management Systems

The Committee approved a Code for approval of Ballast Water Management systems, BWMS Code, as well as amendments to the BWM Convention which mandate that systems be approved under the Code. This Code is technically consistent with the 2016 G8 guidelines adopted by resolution MEPC.279(70). The Committee agreed that Ballast Water Treatment Systems, BWTS, approved in accordance with:

- the revised G8 Guidelines (MEPC.279(70)) are deemed to be in accordance with the Code; and
- the earlier versions of the G8 Guidelines (MEPC.125(53) and MEPC.174(58)) not later than 28 October 2018, may continue to be installed on board ships until 28 October 2020.

## Survey and certification

Two areas relating to survey and certification issues were agreed as a unified interpretation and will be issued as a new circular at MEPC 72 in April 2018:

- Under regulation E-1.1.5, the International BWM Certificate need not be endorsed after completion of an additional survey related to repair or modification of BWT Systems as this is adequately covered by the surveyors report.
- The date of installation of a BWT System, referred to the revised G8 Guidelines and the BWMS Code, is to be the contractual date of delivery of the BWTS to the ship. In the absence of a contractual date, it is the actual date of delivery to the ship. However, the date that commissioning of the BWTS is completed is the date to be used as the Installed Date on the BWM Certificate.

## Guidelines on Contingency Measures

The Committee approved Guidelines on Contingency Measures under the BWM Convention which provide guidance to ship owners and port States when dealing with a vessel arriving with non-compliant ballast water. Contingency measures may include:

- Discharge to another vessels or shore facility,
- Managing all or part of the ballast water in a method acceptable to the port,
- BW Exchange as agreed by the ship and port State, or
- Other operational actions.

Such measures must consider the protection of the marine environment, safety and minimizing impacts on the continuity of port operations.

## Experience-building Phase

Based on extensive work performed by an intersessional correspondence group, the Committee adopted a resolution on the experience building phase associated with the BWM Convention. This resolution outlines a rational explanation of expected activities leading up to and following entry into force of the Convention. Activities considered include:

- Non-penalization of ships that have installed BWT Systems in advance (early movers) prior to the required D-2 compliance date that experience non-compliances, despite proper use and maintenance of the installed systems;
- Gathering of data related to the implementation and operational experience of BWMS;
- Analysis of data reported with respect to pace and progress of implementation as well as any unforeseen safety or environmental concerns; and
- Subsequent review of the Convention and possible amendments based on experience gained.

## Same Risk Area Concept

The Committee adopted amendments to the G7 Guidelines for undertaking a risk assessment as per regulation A-4 of the BWM Convention. Under regulation A-4, a Party may grant, based on a risk assessment, exemptions to ships operating in their jurisdictional waters from the D-1 and/or D-2 standards or from the additional measures it may have established to prevent, reduce, or eliminate the transfer or unwanted organisms under regulation C-1. The amendments describe how risk assessments carried out for the same risk area can be supported by validated, numerical modelling of hydrodynamic, environmental and meteorological conditions.

## **MARPOL Amendments Adopted**

### **MARPOL Annex VI, Regulation 13 (New Emission Control Areas)**

Amendments to Regulation 13 of MARPOL Annex VI were adopted that establish both the North Sea area (including the English Channel) and the Baltic Sea area as new NO<sub>x</sub> Tier III Emission Control Areas (ECAs) for nitrogen oxides. Accordingly, marine diesel engines will be required to comply with the NO<sub>x</sub> Tier III emission standard when installed on ships that:

- are constructed on or after January 1, 2021; and
- operate in either of these two new ECAs,

except for ships having:

- a length less than 24m and specifically designed/used for recreational purposes; or
- a combined propulsion power less than 750kW that cannot comply due to design or construction limitations.

Additionally, temporary exemption provisions are included with the amendments for the purpose of allowing ships fitted with dual-fuel engines or with only Tier II engines to be built, converted, repaired and/or maintained at shipyards or repair facilities located within NO<sub>x</sub> Tier III ECAs. Under the exemption:

- these engines must meet NO<sub>x</sub> Tier II emission standards;
- the ship is only permitted to sail directly to and from the shipyard or other repair facility and must follow any additional specific routing requirements specified by the relevant port State; and
- the ship is not permitted to load or unload cargo.

### **Bunker Delivery Note (BDN)**

The Committee adopted revisions to Appendix V of MARPOL Annex VI which specify the information to be included in the bunker delivery note required under regulation 18.5 of MARPOL Annex VI. The declaration of conformity, required to be provided by the bunker supplier, now allows for the option to document the sulphur content specified by the purchaser, which may exceed relevant limit values, for use on ships fitted with SO<sub>x</sub> abatement equipment or undergoing emission reduction and control technology research. The amendment enters into force on January 1, 2019.

## **Air Pollution and Energy Efficiency**

### **Fuel Oil Data Collection System**

The Committee adopted Guidelines for data verification procedures, to be utilized by Administrations for the verification of annual fuel oil consumption data reported in accordance with the IMO Ship Fuel Oil Consumption data collection system under MARPOL Annex VI/22A of (Resolution MEPC.278(70)). The Guidelines aim to provide a pragmatic verification procedure that ensures consistent, reliable and robust data by incorporating concepts on data quality assurance and verification. The Guidelines do not alter ship's reporting responsibilities as outlined in MARPOL Annex VI, however Administrations may request additional documentation to be submitted in order to facilitate data verification.

Associated Guidelines for the management of the IMO Ship Fuel Oil Consumption Database, that will be the central repository for all data submitted by Administrations to the IMO, were also adopted at this session. Data will be anonymized by rounding data on the reported ship technical characteristics. Therefore, individual ships will not be identifiable. A summary report will be produced for the MEPC on an annual basis, including information on annual fuel consumption by fuel type, aggregated data on FO consumption, distance travelled and hours underway by ship type, and the number of ships registered in the Party of Annex VI, of 5,000 gt and above, for which data was and was not received.

To facilitate full participation in data collection, Guidance, in the form of a new MEPC circular, was also issued clarifying the methods for submitting FO Consumption data from ships under a flag that is not a Party to MARPOL Annex VI.

## Attained Energy Efficiency Design Index (EEDI)

### EEDI Calculations for Ro-Ro Cargo and Ro-Ro Passenger Ships

The Committee approved amendments to Regulation 21 of MARPOL Annex VI, with a view to adoption at MEPC 72 in April 2018, that revise the reference line parameters for the Ro-Ro Cargo and Ro-Ro Passenger Ship types. The draft amendments impose a 20% offset to the EEDI baselines for these two ship types and introduce a new concept which sets constant threshold values for Ro-Ro Cargo Ships 17,000 DWT, and above, and for Ro-Ro Passenger Ships 10,000 DWT, and above. This approach effectively results in an additional 20% margin to account for identified discrepancies in the currently calculated baselines that were developed using overly optimistic presumptions in relation to achievable physical properties for these specific ship types.

### Review of the Status of Technological Developments

A correspondence group has been established to undertake an early review of EEDI phase 3 requirements under Regulation 21 of MARPOL Annex VI, with the possibility of advancing the phase 3 implementation date from 2025 to 2022 after resolving concerns about maintaining minimum propulsion power. The group will also consider whether a new set of phase 4 EEDI reduction rates should be introduced, and if so, recommend an appropriate time period for implementation and associated reduction rates. Available information regarding the status of compliance with existing EEDI requirements and new energy efficiency improving technologies will be gathered and analyzed to support decisions regarding future EEDI reduction rates. The group is expected to complete its work and submit a final report to MEPC 74 in 2019.

The group will also consider the necessity of amending attained EEDI calculation guidelines and reference lines to address issues relating to ice classed ships, associated correction factors and application of EEDI requirements to ships with ice classes higher than IA Super.

### Minimum Propulsion Power

Although progress has been made on the development of amendments to the 2013 Interim Guidelines for determining minimum propulsion power to maintain the maneuverability of ships in adverse conditions -- resolution MEPC.232(65), as amended by MEPC.255(67) and MEPC.262(68), it was decided that the draft revised Guidelines were still not at a suitable stage to be finalized at this session. Accordingly, it was decided to consider the issue further at MEPC 72 and to extend the applicability of the 2013 Interim Guidelines to phase 2 EEDI requirements as an interim solution.

## **IMO Strategy on GHG Emissions**

The Committee tried to progress the development of a comprehensive IMO strategy on reduction of GHG emissions based on the Roadmap approved at MEPC 70. IMO is expected to adopt a strategy on reduction of GHG emissions from ships at MEPC 72 in April 2018. After considering a report from the first Intersessional Working Group, the Committee noted a draft outline for the structure of the initial IMO strategy:

- Preamble/introduction/context including emission scenarios
- Vision
- Levels of ambition / Guiding principles
- List of candidate short-, mid- and long-term further measures with possible timelines and their impacts on States
- Barriers and supportive measures; capacity building and technical cooperation; R&D
- Follow-up actions towards the development of the revised strategy
- Periodic review of the Strategy

It was recognized that any initial IMO strategy may be revised based on Phase 1, but should not prejudge any specific measures that may be implemented in Phase 3, of the agreed 3-step approach:

- Phase 1 - collection of FO consumption data (2019-2021)
- Phase 2 - analysis of that data
- Phase 3 - decision making on what further measures, if any, are needed

When considering GHG emission reduction opportunities, the first Intersessional Working Group received proposals for:

- short-term measures which included effective implementation of the data collection system for fuel oil consumption and analyzing the use of operational energy efficiency measures such as speed reduction;
- short- to medium-term measures which included potentials to improve energy efficiencies in design and development of operational energy efficiency indicators and guidelines; and
- mid- and long-term measures which included robust analysis of data collected from the data collection system before a decision on whether further measures, if any, are required and consideration of Market Based Measures as incentive mechanisms.

## Miscellaneous

### NOx Technical Code

Based on the recommendation of the IMO Sub-Committee on Pollution Prevention and Response (PPR), the Committee considered the need to develop amendments to MARPOL Annex VI and the NOx Technical Code addressing the use of multiple engine operational profiles (Maps). Modern electronically controlled engines can be programmed with different operational profiles in order to optimize fuel consumption under different operating modes, such as, for example, dual fuel operation, selected catalytic reduction operation for Tier III, harbor/sea modes, etc. However, due to concerns that utilization of multiple maps without appropriate restrictions may present an opportunity for an increase in NOx emissions, the Committee did not pursue this further and, instead, returned the recommendation back to the PPR Sub-Committee for further consideration and development of an appropriate scope of work to address concerns raised.

### Consistent Implementation of the Global 0.50% Sulphur Limit in 2020

A new work program on the consistent implementation of the 0.50% global sulphur limit in 2020, as per MARPOL VI regulation 14.1.3, was agreed to be included in the PPR Sub-Committee's agenda for 2018-2019. Under this regulation, the sulphur content of fuel oil used onboard ships shall not exceed 0.50% m/m as of January 1, 2020. Recognizing challenges to implement this requirement, the Committee agreed the scope of this high priority agenda item should include the following:

- transitional issues that may arise when shifting to the new 0.50% m/m sulphur limit;
- possible impact on fuel and machinery systems that may result from the use of fuel oils with a 0.50% m/m sulphur limit;
- verification/control actions that may be necessary to ensure compliance;
- development of a draft standard format for reporting fuel oil non-availability;
- development of guidance, as appropriate, that may assist stakeholders in assessing the sulphur content of fuel oil delivered to the ship is as stated on the bunker delivery note;
- safety implications with regard to using blended fuels to meet the 0.50% sulphur limit; and,
- any consequential regulatory amendments and/or guidelines needed to address the above issues.

ISO has also been requested to consider the framework of ISO 8217 with a view to consistency with the relevant ISO standards on marine fuel oils in this regard.

## Revisions to 2011 SCR Guidelines

An MEPC Resolution was adopted containing the 2017 Guidelines addressing additional aspects to the NOx Technical Code 2008 with regard to particular requirements related to marine diesel engines fitted with selective catalytic reduction (SCR) systems. The revisions clarify certain aspects of testing, surveying and certification of engines equipped with SCR systems. The new resolution supersedes the previous 2011 SCR Guidelines adopted by resolution MEPC.198(62), as amended by resolution MEPC.260(68).

## 2017 Guidelines for Implementing MARPOL Annex V

The Committee adopted a new resolution containing revised 2017 Guidelines for the implementation of MARPOL Annex V, that incorporate amendments concerning E-waste adopted by resolution MEPC.239(65); amendments to MARPOL Annex V concerning cargo residues; as well as proposed new amendments to align the Guidelines with relevant requirements in the Polar Code. A definition of E-waste has also been included for the purpose of the revised guidelines.