

Essential preparations for compliance and contingency options

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ABSTRACT

Even though the Ballast Water Management Convention (BWMC) (referred to herewith as the Convention) has been ratified and a few ballast water management systems (BWMS) have received US Coast Guard (USCG) type approval, many shipowners and operators are reticent to begin the significant process of planning for compliance with ballast water discharge and performance standards. This delay is most probably due to the uncertainty in the implementation dates in the BWMC and limited options of USCG type approved BWMS. These delays may result in significant ramifications for shipowners if the process for compliance is not fully evaluated. This process includes selecting, designing installation, purchasing, start-up and commissioning of BWMS. Clarity on the implementation schedule should be determined at the 71st session of the Marine Environmental Protection Committee of the International Maritime Organization (IMO MEPC 71) and allow shipowners to plan for compliance.

An important aspect of implementation is developing a strong compliance plan. A central part of compliance is identifying possible problems and contingency options that may alleviate any potential port State control issues. The paper will identify possible problems and contingency measures to ensure ship operations are not impacted. An important issue is that the BWMC does not include provisions for contingency measures. The paper will also outline needed contingency measures to be addressed by the IMO in any amendments to the BWMC.

Keywords: BWM Convention, compliance, contingencies

1. Introduction

The reality of compliance with ballast water management (BWM) regulations is upon all shipowners and operators. The International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWMC) will enter into force on 8 September 2017, and the USCG has type approved three ballast water management systems (BWMS) for use when discharging ballast water in US waters. These important events have highlighted the urgency for shipowners and operators to prepare for compliance with the various BWM requirements.

2. Preparations for Compliance

Shipowners and operators need to begin a structured process for compliance. An important aspect is understanding ship ballasting operations – where, when, how frequent, and the rate ballast water is taken up and discharged. Information on ballasting operations is essential to the overall plan. First, ballast operations identify if any region-specific BWM requirements may apply. For example, ships that operate worldwide and in US waters need to be in compliance with both requirements. After knowing the region-specific requirements, a project plan for achieving the compliance dates need to be established.

Unfortunately, the exact compliance dates for the BWMC is uncertain. Regulation B-3 of the Convention is the schedule for meeting the performance standards. Current text identifies the intermediate or renewal survey as key dates. Due to the delay in ratification of the Convention, the dates listed in Regulation B-3 have passed. IMO Assembly Resolution A.1088(28)

recommended that the schedule for enforcement of existing vessels aligns with the International Oil Pollution Prevention (IOPP) renewal survey. The 69th Session of the IMO Marine Environment Protection Committee (MEPC 69) approved draft amendments to Regulation B-3 of the BWM Convention that align with IMO Assembly Resolution A.1088(28), but MEPC 70 also developed draft alternate amendments for consideration. **Error! Reference source not found.** compares the implementation dates in draft amendments to Regulation B-3.

Table 1. BWM Convention Regulation B-3 Draft Amendments.

Vessel Age	MEPC 69 Draft Amendments to Regulation B-3	MEPC 70 Draft Alternative Amendments to Regulation B-3
New Vessels	Ship constructed on or after EIF	Ship constructed on or after 8 September 2019
Existing Vessels	First IOPP renewal survey after 8 September 2017	First IOPP renewal survey after 8 September 2019

Regulation B-3 of the BWM Convention cannot be amended until EIF. MEPC 71 is expected to approve the final text for amendment of Regulation B-3. Therefore, the exact BWM Convention compliance dates for installing a ballast water management system (BWMS) are uncertain until July 2017.

Regardless of this uncertainty, shipowners need to continue planning and assessing operations. The overall process for a ship to have a BWMS installed and operational is approximately two years. Effective planning will minimise problems and may present cost-effective options. Delays in planning will most likely increase prices and could impact compliance dates.

An important first step is identifying the vessel-specific requirements. While the vessel details (i.e., such as ballast tanks, pumps and pump capacities) are reported in technical documents. Shipowners should assess if the vessel needs to have BWMS that match the maximum ballast pump capacities of the vessel or if smaller capacity systems may be used. Smaller BWMSs may be chosen if the shipowner/operator ensures that ballast operations do not exceed the treatment rated capacity (TRC) of the BWMS. Determining if all ballast tanks are used is also an important factor.

After assembling information on the vessel specifics, a suitable BWMS can be identified. Many factors impact identification of suitable BWMS. If the vessel normally operates in a geographic area with special water quality concerns, such as freshwater or high sediment, the shipowner may want to ensure the BWMS was sufficiently challenged in such conditions. The vessel may also have some physical limitations that may limit BWMS options. The shipowner also needs to determine the most appropriate space for installation of BWMS and assess the available ship systems (i.e., power, piping). After identify BWMS options, a detailed evaluation of the options should be conducted to determine the “best” choice addressing the shipowners needs.

After selecting the BWMS, the shipowner needs to plan for installation, integration and commissioning of the BWMS. A detailed plan will minimize problems that may impact delays in commercial operations. Engineering firms and equipment vendors need to provide proper

deadlines for receipt of equipment. Early planning may allow for some components to be installed or placed onboard the vessels while in service.

A few extra planning details will also allow for an efficient project. Removal of sediment from ballast tanks is an important step prior to start-up of the BWMS. Sediment in tanks will impact the ability for BWMS to start-up and properly operate. Removal of sediment will also minimise issues with proper operation of a BWMS and allow for achieving the performance standards – in the event of any testing. Sufficient time should also be allotted for commissioning of the BWMS to ensure continuous operation of the BWMS. Testing of the treated water during commissioning may also be useful to identify any possible problems with the BWMS. For ships with existing BWMS that have not been used, the re-start-up of the BWMS with an updated commissioning and testing may be essential to ensure the BWMS is operating properly.

The last step of an effective compliance strategy is completion of detailed documentation, such as Ballast Water Management Plans (BWMP) and training materials. BWMSs are complicated shipboard equipment. Crew needs to have clear, concise, continual training. Documentation should also be maintained on board that outlines the equipment and operating process.

3. Contingency

As shipowners move from installation to operation, ship crew should be aware of possible operational issues and identify plans for mitigation of problems. Operational problems may range from a vessel operating in challenging water conditions to specific minor components experiencing some technical issues to the BWMS not being able to operate for a complete cycle. The BWMP should identify contingency options and the details for mitigation. A few tools are available to shipowners to ensure the process for compliance is smooth. The ship-specific BWMP needs to include extensive details on the BWMS, identify problems that may occur, and contingencies in the event of problems. Crew should be properly trained and have ongoing training. Ships should also have contact information for the possible port States in the event the BWMS is not operable. Shipowners and operators should also consider having a means to monitor the BWMS to determine if the system is operating properly.

4. Conclusion

As the industry moves forward for implementation of the Convention, it is important to know that the Convention has the ability to be modified. Some aspects of the Convention could be improved. For example, the Convention does not include any contingencies for BWMS operational problems and does not allow for continued ballast water exchange (BWE) after the applicable dates. BWE may need to be evaluated as a possible option for BWMS operational problems. Many ships have also removed sediment from ballast tanks by the “swish and spit” operation, which will no longer be permitted after the BWM Convention EIF. Administrations and Non-Governmental Organisations (NGOs) should identify needed contingencies for consideration at MEPC 71.

The preparations for compliance with the BWMC are varied and detailed. Shipowners and operators have many tasks to undertake, but careful planning and execution will allow for ships to move forward in an efficient manner.



References

International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention). 2004. International Maritime Organization.

IMO Assembly Resolution A.1088(28)

MEPC 69/21/Add.1 ANNEX 4 – Draft Amendments to Regulation B-3 of the BWM Convention

MEPC 70/WP.12 - Draft alternate amendments to regulation B-3 of the BWM Convention and associated draft MEPC resolution - Submitted by a group of interested parties