KOREAN REGISTER OF SHIPPING

36, Myeongji ocean city 9-ro,
Gangseo-gu, Busan, 618-814,
The Republic of Korea
Phone : +82-70-8799-8330
Fax : +82-70-8799-8339
E-mail : convention@krs.co.kr
Date : 27 August 2019
Person in charge : Kim Hoi-Jun

TECHNICAL INFORMATION

NO.2019-IMO-06

Subject : Considerations to implement D-2 standard of IMO BWM Convention

The BWM Convention(International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004. hereinafter BWM Convention), formally adopted in 2004, is the international measures to prevent and minimize the risk from spread of harmful and invasive aquatic species transferred from ships ballast water and entered into force on 8 September 2017.

MEPC 72(April 2018), taking into account insufficient availability of dry-docking facilities which are capable of installing BWMS onboard existing ships and BWMSs type approved in accordance with revised G8 Guidelines (Res.MEPC.279(70) and BWMS Code) and USCG type approval requirements, adopted draft amendments to regulation B-3 extending implementation schedules of D-2 standard for some designated ships by Res.MEPC.297(72).

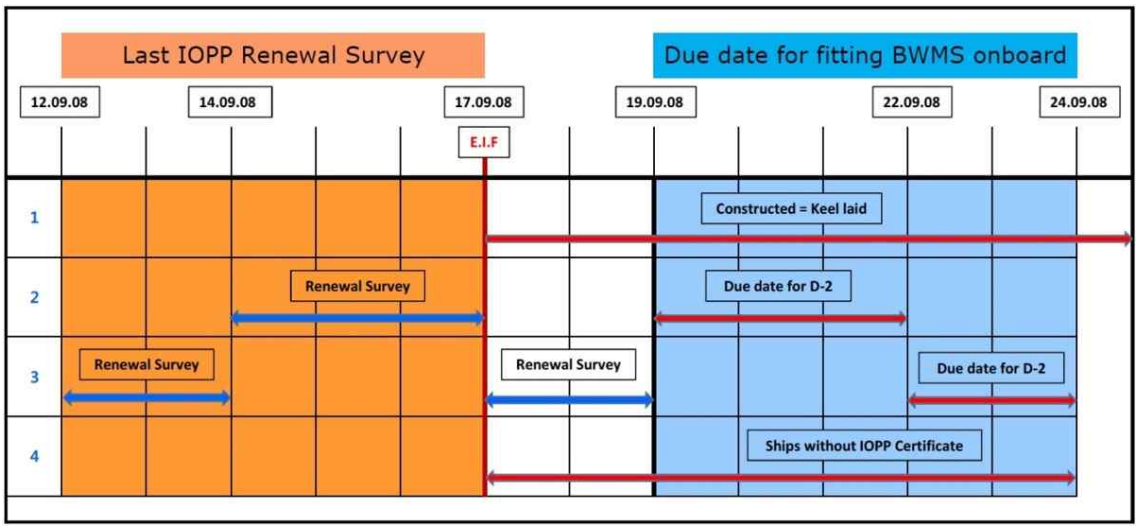
While above draft amendments will be entered into force on 13 September 2019, MEPC 71 (July 2017) further adopted a resolution mentioning the 'early implementation' of the amendments to be implemented on or after the date of entry into force of the Convention by Res.MEPC.287(71).

For the ships constructed before the date of entry into force of the Convention, revised regulation B-3 requires the compliance with D-2 standard by first or second IOPP renewal survey on or after the date of entry into force of the Convention. In particular, for the ships which are not subject to the mandatory implementation of D-2 standard yet, due date for compliance with D-2 standard shall be of first IOPP renewal survey on or after the date of entry into force of the Convention.

This information is relating to the implementation schedules for D-2 standard and relevant guidelines for smooth implementation of the Convention, and thus we would like to provide our customers with the requirements and references on above, ship owners, builders, and all related stakeholders are kindly invited to pay full attention to implement the requirements accordingly.

- Contents -

1. Implementation schedules in accordance with revised Reg. B-3 of BWM Convention (Res.MEPC.297(72))



.1 Ship constructed on or after 8 September 2017 shall comply with D-2 standard as of ship's delivery;

.2 For the ships constructed before 8 September 2017, if previous IOPP renewal survey was completed on or after 8 September 2014 but prior to 8 September 2017[1)], those ships shall comply with D-2 standard by the first IOPP renewal survey on or after 8 September 2017;

.3 For the ships constructed before 8 September 2017, if previous IOPP renewal survey was completed on or after 8 September 2012 but prior to 8 September 2014[2)], those ships shall comply with D-2 standard by the second IOPP renewal survey on or after 8 September 2017, provided the first IOPP renewal survey on or after 8 September 2017 is completed prior to 8 September 2019;

---

1) For the ships whose previous IOPP renewal survey was completed on or after 8 September 2014 but prior to 8 September 2017, bringing forward IOPP renewal survey prior to 8 September 2019 for the purpose of extending due date for installation of BWMS is legally impossible. Those ships shall comply with D-2 standard by the first IOPP renewal survey on or after 8 September 2017.

2) For the ships whose previous IOPP renewal survey was completed on or after 8 September 2012 but prior to 8 September 2014, if the first IOPP renewal survey on or after 8 September 2017 is completed on or after 8 September 2019, this completion date shall be of due date for compliance with D-2 standard. In the cases where the first IOPP renewal survey on or after 8 September 2017 could not be completed prior to 8 September 2019 or expiry date of renewal survey is extended by the Administration under the specific circumstances, completion of IOPP renewal survey other than other renewal surveys may be considered. But, in this case, it is noted that consultation with ship's flag Administration may be required.

.4 For the ships constructed before 8 September 2017 but an initial survey is completed on or after 8 September 2019, D-2 compliance shall be required as of that initial survey. But, if an initial survey is completed before 8 September 2019, D-2 compliance shall be required by the first IOPP renewal survey on or after 8 September 2019;

.5 Ships without IOPP certificate (ex: ships of less than 400 GT, etc) shall comply with D-2 standard from the date decided by the Administration, but not later than 8 September 2024;

.6 IOPP renewal survey mentioned above includes an Initial survey; and

.7 Implementation schedules for D-2 standard shall be based on the actual completion date of IOPP renewal survey, namely completion date referred in IOPP Certificate.

2. Contingency Measure under the BWM Convention (BWM.2/Circ.62)

'Contingency Measure' means a process undertaken on a case by case basis after a determination by the ship or the port State that ballast water to be discharged from a ship is not compliant, in order to allow ballast water to be managed such that it does not pose unacceptable risks to the environment, human health, property and resources. This guidance is applicable to the case of a ship unable to manage ballast water in accordance with its approved ballast water management plan to meet the D-1 or D-2 standard, and provides following details:

.1 Contingency measures are possible actions to be taken by the ship when discharged ballast water is found not to meet the D-1 or D-2 standard, and implemented as follows:
- Actions predetermined in the Ballast Water Management Plan of the ship;
- Discharging ballast water to another ship or to an appropriate shipboard or land-based reception facility, if any;
- Managing the ballast water or a portion of it in accordance with a method acceptable to the port States;
- Ballast water exchange carried out to meet D-1 standard; and
- Operational actions, such as modifying sailing or ballast water exchange schedules, internal transfer of ballast water or the retention of ballast water on board the ship.

.2 In any cases, the ship is required to do its best to correct malfunction of the BWMS as soon as possible and submit its repair plan to the port State control authorities and flag State.

3. Guidance on th application of the BWM Convention to ships operating solely in sea areas where ballast water exchange in accordance with Reg.B-4.1 is not possible due to geographical limitations (BWM.2/Circ.63)

With respect to the particular concerns that the ships operating in sea area where the parameter on distance and location of sea area for ballast water exchange does not correspond to the Reg.B-4.1 (at least 200 nautical miles from the nearest land and in water at least 200 meters in depth) could not practically conduct ballast water exchange, taking into account that MEPC 67 had agreed that ships operating such a sea area should not be required to install BWMS onboard until effectively and legally required to do so, MEPC 71 approved BWM.2/Circ.63 with the following guidance:

.1 Until the date a ship is required to meet regulation D-2 in accordance with regulation B-3, a ship operating in a sea area where ballast water exchange in accordance with regulation B-4.1 and D-1 is not possible:
- should not be required to meet the D-2 standard;
- should not be required to proceed under regulation B-3.6 (discharge to a reception facility), B-3.7 (other methods) or A-4 (exemption), and should not be required to meet the D-2 standard regardless it the ship does not comply with such methods; and
- should record the reasons why ballast water exchange was not conducted in accordance with regulation B-4.5.

.2 In cases where the port State has established designated areas for ballast water exchange in accordance with regulation B-4.2, regulation B-4.2 should be implemented as referred to in paragraph 10.3 of the Guidelines on designation of areas for ballast water exchange (G14, Res.MEPC.151(55)):
- The ship should comply with the terms of use for those areas provided by the port State, otherwise the ship should not be required to deviate from its intended voyage, or delay the voyage;
- When a ship does not have sufficient time to carry out the exchange for all of its ballast water complying with the standard in regulation D-1, taking into

account the BWMP, the ship should comply with the terms of use for those areas provided by the port State in accordance with paragraph 10.3 of the Guidelines (G14).

* Paragraph 10.3 of G14

- Port States should provide adequate advice to ships on the location and terms of use of the designated ballast water exchange area. Such advice may include exchanging as many tanks as possible under regulation B-4.1, as far as practicable taking into account regulation B-4.3, before utilizing the designated ballast water area.

4. Guidance on the exception and exemption under the certain circumstances on a case where ships would realistically not comply with the Convention (BWM.2/Circ.52/Rev.1)

For the alternative ballast water management methods for ships operating exclusively in a specified area but engaged in a single international voyage for periodic dry-docking repair or maintenance, MEPC 71 agreed that, for those ships with such that operational characteristics, ballast water exchange should also be allowed as an alternative. Taking into account that BWM Convention does not provide any provisions on the situation of ships which have granted exemptions, such as voyages for dry-docking repair or maintenance abroad outside a specified area, MEPC 71 approved BWM.2/Circ.52/Rev.1 with the following guidance:

.1 Article 3.2(b) and 3.2(c) of BWM Convention exclude ships that only operate in waters under the jurisdiction of a single Party. In addition, article 3.2(d) excludes ships that only operate in waters under the jurisdiction of a single Party and on the high seas. In this regard, a guidance to be applied on cases where a ship with exemption given by the Administration is engaged in a single international voyage due to dry-docking and others, and where a ship is re-entered in waters under the jurisdiction was provided.

.2 Before ceasing application of the Convention to a ship, the Administration should verify that the ship:

- is in compliance with the Convention and holds a valid IBWM Certificate;
- has fully discharged all ballast water, including any residual ballast water, and has completely removed and disposed of all sediments, in accordance with the Convention and the ship's approved BWMP;

- has a procedure in its approved BWMP for thoroughly cleaning its ballast water tanks, piping and equipment that is satisfactory to the Administration; and
- has carried out the procedure described above, to the satisfaction of the Administration.

.3 Upon cessation of the application of the Convention to a ship, any IBWM Certificate issued to the ship should be withdrawn.

.4 A ship on a single voyage may be granted an exemption under regulation A-4 on the condition that the ship performs ballast water exchange in accordance with regulation B-4 and D-1 and an approved BWMP. The requirements of regulation A-4.1.4 should be addressed to the satisfaction of the countries of origin and destination of the ship.

5. Commissioning Test of individual BWMS

MEPC 70 agreed that compliance with regulation of D-2 of the BWM Convention should be validated in conjunction with commissioning of individual BWMS, and MEPC 73, taking into account the views that this validation procedure is essential to ensure the effective operation of BWMS installed onboard ships and should not be kept in abeyance while there are no unified and certified methodologies to analyze ballast water treated by the BWMS, approved BWM.2/Circ.70.

.1 Sample ballast water should be collected during BW uptake and corresponding ballast water discharge after the full treatment has been applied. Sample should be taken in accordance with the Guidleines on ballast water sampling (G2);

.2 The representative samples should be analyzed for all size classes included in the D-2 standards using indicative analysis methods listed in table 3 of BWM.2/Circ.42/Rev.1; and

.3 Applicable self-monitoring parameters of the BWMS should also be assessed, taking into account the System Design Limitations of the BWMS, and the correct operation of all sensors and related equipment should be confirmed.

But, taking into account that there was still no legal basis to carry out commissioning test for BWMS onboard ships in the BWM Convention, MEPC 74 approved draft amendments to regulation E-1 of BWM Convention requiring survey and certification for ballast water management adding confirmation that a commissioning test has been conducted to validate the installation of any BWMS to demonstrate that its mechanical, physical, chemical and biological processes are working properly, with a view to the adoption at MEPC 75, and further agreed following principles:

.1 Commissioning Testing should begin as soon as possible;

.2 It should not be applicable to ships that already installed a BWMS onboard and were certified for compliance with D-2 standard; and

.3 As a commissioning testing, indicative analysis should be carried out.

Moreover, MEPC 74 urged the Administrations to provide the industries with written and clear instructions[3] in relation to the conduct of indicative analysis testing of BWMSs, including in the event of this testing demonstrating non-compliance.

6. Ballast water management in the sea areas beyond the system design limitation of individual BWMS

In a case where ballast water management is conducted by BWMS in the sea areas beyond the system design limitations of individual BWMS such as turbidity and salinity, taking into account the current BWM Convention and related guidelines, the following alternative ballast water management methods may be conducted through the communication and consultation with port Authority:

.1 In the cases where the condition of water quality does not ensure proper operation of BWMS, thereby ballast water management could not be conducted causing malfunction of the system, it could be considered to 'Contingency measure' in accordance with BWM.2/Circ.62. Thus, communication and consultation with port Authority in terms of the alternative ballast water management methods for untreated or partially treated ballast water should be required. However, objective and technical evidences for malfunction of BWMS and/or failure to proper

3) Maritime and Port Authority of Singapore (MPA) published an instruction (MPA Shipping Circular No.9) on commissioning test of BWMS for Singapore flagged ships. For more detailed information, refer to the previous Technical Information (2019-IMO-05)

operation of the system due to the water quality will be required by the port Authority, and those facts should be recorded in the ballast water record book accordingly.

.2 In the cases where the condition of water quality does not ensure proper operation of BWMS, thereby ballast water management could not be conducted causing malfunction of the system, ballast water exchange together with ballast water treatment (BWE + BWT) may be conducted in the sea areas out of port limits after departure.

A concept of BWE + BWT means using of treated ballast water through BWMS when ballast water is exchanged, and is under the discussion in the IMO. But, it is noted that some Administrations or port Authorities are allowing this method so as to ensure more effective ballast water management under the certain circumstances. (refer to MEPC 74/INF.22)

However, bearing in mind that discharge of untreated ballast water in the high sea from the ships which are required to comply with D-2 standard only is legally prohibited and untreated ballast water may be discharged into the sea areas when ballast water exchange is conducted in the sea areas out of port limits, the possibility of this approach must be considered through communication and consultation with departure and destination port Authorities. These facts should also be recorded in the ballast water record book accordingly. - The end -

Attachments - each 1 copy

1. Res.MEPC.279(70) - New G8 Guidelines
2. Res.MEPC.287(71) - Early Implementation of revised regulation B-3 of BWM Convention
3. Res.MEPC.292(72) - Revised regulation B-3 of BWM Convention
4. Res.MEPC.300(72) - BWMS Code
5. BWM.2/Circ.52/Rev.1 - Guidance on entry or re-entry of ships into exclusive operation
6. BWM.2/Circ.62 - Guidance on contingency measures under the BWM Convention
7. BWM.2/Circ.63 - Application of the Convention to ships operating in sea areas where ballast water exchange in accordance with regulations B-4.1 and D-1 is possible
8. BWM.2/Circ.70 - Guidance for the commissioning testing of BWMS
9. MEPC 74/INF.22 - Practicality and safety of ballast water exchange plus treatment

Distributions : KR surveyors, Ship owners, Ship builders, Other stakeholders