

TECHNICAL AND REGULATORY NEWS No. 02/2017 - Technical

BALLAST WATER MANAGEMENT - HOW TO COMPLY WITH THE IMO CONVENTION

Relevant for ship owners/managers, shipyards, suppliers, design offices and flag states.

February 2017

With the ratification of the IMO Ballast Water Management Convention on 8 September 2016, the convention will enter into force on 8 September 2017. With only some months to go, this Technical & Regulatory News is intended as a supporting document for the BWM implementation phase, focusing on compliance.



Timeline

With the International Ballast Water Management (BWM) Convention ratified and shortly entering into force, there is no time to lose up to 8 September 2017. There are two main milestones to be aware of:

- D-1 - Ballast Water Management Plan (BWMP): an approved BWMP and a BWM Certificate or Statement/Certificate of Compliance must be on board the vessel before 8 September 2017, hence an early submission for approval is recommended to avoid last-minute approval
- D-2 - The deadline for installation of the ballast water treatment system is the first IOPP renewal survey after 8 September 2017

Ship owner check list:

The most important tasks for a ship owner/operator to do in the short term - in order of priority:

- Identify the vessels subject to the BWM Convention
- Investigate if an approved BWMP for the approved ballast water exchange process is already prepared and on board (if not, see below)
- Establish an overview of IOPP renewal dates for your fleet, and decide on a schedule for implementation
- Confirm any uncertainties/questions you might have with class and/or the relevant flag

Then, after these urgent issues have been solved, some other key activities for the remaining of 2017:

- Prepare and submit your BWMP
- Order and perform the initial survey (in due time before 8 September 2017)
- Make sure mandatory documentation (BWMP and International BWM Certificate or Statement/Certificate of Compliance) is in place before 8 September 2017
- Assess and choose treatment technology based on feasibility for your fleet
- Plan your retrofit, and ensure relevant documents are forwarded to class as early as possible

The remainder of this document - as an appendix - is organized as follows (click on heading to get to the relevant sections):

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References

Further information including guidelines, brochure and FAQs can be found on the DNV GL website:

www.dnvgl.com/bwm

CONTACT

For customers:

DATE - Direct Access to Technical Experts via [My DNV GL](#)

Otherwise:

Use our [office locator](#) to find the nearest DNV GL maritime office.

Appendix

1. BWM CONVENTION - APPLICATION AND REQUIREMENTS

Vessels/Units covered by the BWM Convention

The BWM Convention applies to almost all vessels using ballast water in international trade. The convention defines ships as floating craft, floating platforms, FSUs and FPSOs with the following specifications:

- Above 400 GT: Subject to the approval of the BWM plan, a survey and the provision of a BWM Certificate.
- Below 400 GT: Must have an approved BWM Plan on board. Surveys and certification will be subject to the requirements as set by the administration.

Exemptions from the BWM Convention

For vessels trading in a limited area, e.g. ferries, offshore supply vessels or coasters, where ballast water operations will not harm the marine ecosystem, port states may issue exemptions from the BWM Convention's operational requirements following a risk assessment and an application by the owner. Such exemptions might also be applicable to vessels which are laid up or used as storage facilities for a longer period of time.

An exemption by the port state does not however exempt the vessel from the need to comply with the flag state requirements with regards to the BWM Convention. At the moment, exemptions by the flag state are not addressed in the BWM Convention. Therefore, consultations with the flag state are required to obtain either a general position on the handling of exemptions or a case-by-case decision.

2. REQUIREMENTS OF THE BWM CONVENTION

D-1 and D-2 standards

The convention refers to two standards for discharged ballast water that aim to prevent harm to the marine ecosystem: the D-1 standard covers ballast water exchange, while the D-2 standard stipulates the maximum number of organisms that can be discharged, usually achieved by ballast water treatment systems. The convention requires either the D-1 or D-2 standards to be complied with after entry into force date (8 September 2017). The aim is that all vessels to which the convention applies will comply with the D-2 standard by the end of 2022.

There will be a transitional period from the date of entry into force, when compliance with the D-1 standard is required, until compliance with the D-2 standard becomes mandatory. This date is firmly linked to the first IOPP renewal survey after the BWM Convention enters into force. The D-1 and D-2 requirements:

D-1 standard

1. The approved BWMP must be available on board.
2. The BWM record book must be provided on board to document all ballast water operations from 8 September 2017 onwards.
3. An initial survey must be carried out to verify the compliance of the structure, equipment, systems, arrangements, etc. according to the BWM Convention requirements. The BWM Certificate confirming compliance with the D-1 standard must be available on board.

D-2 standard (for an installed BWM treatment system and in addition to the requirements for D-1)

1. A type-approved BWM treatment system installed and covered by a type-approval certificate issued by the administration.
2. Approved technical documentation for the BWM treatment system.
3. Operation manual for the BWM treatment system.
4. An initial survey must be carried out to confirm compliance with the D-2 standard.
5. The BWM Certificate confirming compliance with the D-2 standard must be available on board.

For both D-1 and D-2, the following applies: In the case that the vessel's flag has not yet ratified the convention, a Statement of Compliance (SoC) shall be issued and available on board.

US Coast Guard requirements

All ships calling at US ports and intending to discharge ballast water must carry out either exchange or treatment in addition to fouling and sediment management. The exchange of ballast water will only be allowed until the implementation deadlines for treatment systems come into force. The US Coast Guard has introduced deadlines for the installation of BWM treatment systems that are different from those stipulated in the BWM Convention referring to the vessel's regular dry-docking:

	Vessel's BW capacity	Date constructed	Vessel's compliance date
New vessels	All	On or after 1 December 2013	On delivery
Existing vessels	Less than 1,500 m ³	Before 1 December 2013	First scheduled dry-docking after 1 January 2016
	1,500-5,000 m ³	Before 1 December 2013	First scheduled dry-docking after 1 January 2014
	Greater than 5,000 m ³	Before 1 December 2013	First scheduled dry-docking after 1 January 2016

At the time of publication of this news, a limited number of BWM treatment systems have been approved meeting the US Coast Guard (USCG) requirements. Some treatment systems with a type-approval certificate according to IMO standards are temporarily accepted by the USCG Alternative Management System (AMS) for a period of five years, with the possibility of a further five-year extension, allowing these treatment systems to be used in US waters. Reference is made to Environmental on the [USCG website](#).

Current practice is that the US Coast Guard is exempting vessels from its BWM scheme due to the limited number of systems that meet its standards. The existence of two different performance standards for BWM treatment systems significantly affects the owner's decision on when to install which treatment system.

3. APPROVAL OF BALLAST WATER MANAGEMENT PLAN (BWMP) AND INSTALLATION OF A TREATMENT SYSTEM

D-1 standard (BWMP)

Since a significant number of BWMPs need to be approved and provided on board before 8 September 2017, it is urgent that owners of vessels not yet furnished with an approved BWM plan do submit the plans as soon as possible.

Suggested process for BWMP approval: A Web-based application will be published on *My DNV GL* shortly to provide the owner with a standard BWMP template pre-populated with available data for a standardized and more efficient approval process.

Any requests and BWMP approval (irrespective of whether it is generated by the app or not) should be sent to the following email address: bwmp.exchange@dnvgl.com

If the vessel is not provided with an approved BWMP and the relevant certificate by 8 September 2017, Port State Control (PSC) deficiencies or detentions and the imposing of Conditions of Authority by DNV GL surveyors may be the consequence.

For vessels already holding an approved BWMP, a survey should be ordered to trigger the issuance of a BWM Certificate.

D-2 standard - fleet in service (existing ships)

Retrofitting a BWM treatment system for a vessel in service is subject to DNV GL plan approval, and it is recommended that the owner involve the approval units at an early stage. A DNV GL Retrofit Guide is available for further guidance on the resource website at www.dnvgl.com/bwm. Please contact the units as follows (depending on vessel's previous class):

Ships under previous DNV class and DNV GL vessels:
conversions.osl@dnvgl.com

Ships under previous GL class:
conversion@dnvgl.com

D-2 standard - new building

Ships with a keel-laying date after the entry into force date (8 September 2017) will be required to have a BWM treatment system installed upon delivery. The date of entry into force might trigger a retrofit for ongoing newbuilding projects, as well, for the following reasons:

- The project is still in the plan approval phase.
- Keel-laying has not taken place by 8 September 2017.
- The owner or shipyard would like to provide the vessel with a BWM treatment system upon delivery to avoid a more costly and time-consuming conversion after a few years in connection with the next renewal survey.

4. BWM SURVEYS

D-1 survey

An approved BWMP is a precondition for a BWM survey. The initial BWM survey needs to be performed before the date of entry into force on 8 September 2017 and should preferably be carried out together with the first upcoming class or statutory survey to avoid additional cost.

For vessels with an approved BWMP already in place, the survey should be ordered directly from the local DNV GL station (or via *My DNV GL*).

D-2 survey

A precondition for an initial survey for the D-2 standard is the plan approval of the conversion and the approved BWMP, usually the approved BWMP according to the D-1 standard with an appendix according to the D-2 standard. The survey for the installed BWM treatment system includes the survey requirements mentioned under the D-1 standard with a more extensive survey scheme with regard to the installation and safety requirements for treatment systems.

5. BWM CERTIFICATION

A precondition for the issuance of a BWM Certificate is an approved BWMP and an initial survey, as described above. Depending on the status of the vessel's flag state, the following certificate document options apply:

Document	Provisions
International Ballast Water Management Certificate (BWMC)	The flag has ratified the BWMC and DNV GL has authorized compliance*
Certificate of Compliance on behalf of the flag	The flag has not yet ratified the BWMC, but DNV GL has authorized compliance. The International Ballast Water Certificate will be issued when the flag has ratified the convention
Statement of Compliance at the request of owner	Can be issued by DNV GL even without ratification or authorization

*According to IMO circular BWM.2/Circ.40: the certificate is not valid until entry into force on 8 September 2017.

6. RETROACTIVE REQUIREMENTS (RR)

Specific RR messages are posted on *My DNV GL* for individual vessels to alert the owner/manager about due dates and necessary actions to ensure the proper follow-up of the implementation requirements. The RRs shall also be observed by the attending surveyor and the certificate department as a guidance for dealing with these requirements accordingly. When a survey has been completed and/or a certificate has been issued, the respective RRs will be deleted.

7. DE-COUPLING OF THE IOPP CERTIFICATE (DE-HARMONIZATION OF HSSC)

Considerations

In order to gain time until type-approved BWM treatment systems need to be installed on board and to reflect the uncertainty about treatment systems meeting US Coast Guard performance requirements, some customers might consider de-coupling the IOPP certificate from the Harmonized System of Survey and Certification (HSSC) by conducting an early IOPP renewal survey.

Although the HSSC does not explicitly prohibit the de-coupling of single certificates, the following challenges should be taken into consideration:

- Not all flag states or port states may accept the de-coupling of the IOPP Certificate. This could lead to difficulties in operating ships in these territorial waters or even to the ship being stopped from trading through PSC detentions.

- Owners with vessels where the de-coupling of the IOPP Certificate has been allowed by the flag state administration might face discussions with and rejection by the new flag state administration if changing flag.
- Owners of oil tankers should observe that the mandatory carriage requirements for a loading computer which entered into force on 1 January 2016 are closely connected with the IOPP renewal survey. (Ref.: MARPOL Annex I 2014 Amendments (Res. MEPC.248(66))

While there are motivations for IOPP de-coupling, DNV GL recommends bringing all relevant class and statutory renewal surveys forward and thereby keeping the IOPP Certificate within the HSSC time window and also postponing the installation of the BWM treatment system. Such an early renewal survey does not require acceptance by the flag state administration but might result in financial and organizational challenges for the owner with regard to charter parties and docking capacity.

IOPP Certificate

- If IOPP de-coupling has been decided, the owner should inform DNV GL as early as possible to allow DNV GL to make the necessary arrangements in advance. DNV GL can be informed via DATE or at the following email address to provide all the necessary information: certificates@dnvgl.com
- De-coupling of the IOPP Certificate from the other statutory certificates requires written acceptance by the flag state. This might be a case-by-case acceptance or a general acceptance published in a marine circular by the administration.
- DNV GL will verify the flag acceptance, prepare for the local issuance of the IOPP Certificate and update the IOPP scheme accordingly.

If acceptance for IOPP de-coupling has been provided by the flag state administration, the following should be noted:

- A separate survey should be ordered by the owner from a local DNV GL station via the *My DNV GL* portal.
- The surveyor will then perform the IOPP renewal survey and issue the full-term certificate on board.
- The harmonization of the IOPP Certificate after the postponed installation of the BWM treatment system will comply with the flag state administration's requirements. In general, the IOPP Certificate will be harmonized with the other class and statutory certificates through an additional renewal survey.
- It is recommended to perform the renewal survey for the IOPP Certificate during the time window for other periodic surveys to ensure that both time windows overlap to the extent possible and thereby avoiding separate visits at the time of the de-coupling and in the future. This means the owner should order an IOPP renewal survey instead of an annual or intermediate survey.

IOPP Certificate Technicalities

The de-coupled IOPP Certificate becomes relevant for the validity of the BWM Certificate confirming compliance with the D-1 standard. This is explained in the way that the IOPP Certificate renewal survey after five years will trigger the installation of the BWM treatment system which will be in connection with an initial survey, which is then reflected in a new BWM certificate confirming the compliance with the D-2 standard. In order to finally harmonize all certificates, the IOPP and BWM Certificates will be issued with the same validity until the next renewal survey as for the other class and statutory certificates.

8. HEALTH AND SAFETY ISSUES DURING SURVEYS OF BALLAST WATER TANKS

BWM treatment systems which make use of different methods to minimize and control the number of invasive marine species by, for instance, de-oxygenation, electro chlorination or ozonation might create heavier-than-air gases which may be harmful/toxic to personnel. Before entering BW tanks, the following should therefore be done:

- Identify confined space hazards (e.g. check the properties of any physical or chemical agents used)
- Ensure safe work procedures (e.g. forced ventilation)
- Select appropriate test devices and personal protective equipment

The BWMP shall include the part of the BWM treatment system's operation manual that addresses any potential hazards.