

## **KISH P & I LOSS PREVENTION CIRCULAR KPI-LP-118-2013** **(An Update on Ballast Water Management 2004 Convention)**

### ► **Entering Into Force:**

The Convention will come into force twelve months after thirty states representing 35 per cent of the world's merchant shipping tonnage have signed it without reservation or have ratified it.

Thirty six states which have ratified the Convention to date, representing approximately 29 per cent of the 35 per cent required. The remaining 6 per cent are expected to be obtained soon.

### ► **MEPC Guidelines:**

In addition to the Convention, the IMO Marine Environment Protection Committee (MEPC) have developed and adopted a series of "Guidelines" to facilitate the implementation, uniform interpretation and application of the Convention.

These guidelines are an important supplement to the Convention:

- G1 Sediment reception facilities;
- G2 Ballast water sampling;
- G3 Ballast water management equivalent compliance;
- G4 Ballast water management and development of ballast water management plans;
- G5 Ballast water reception facilities;
- G6 Ballast water exchange;
- G7 Risk assessment under regulation A-4 of the BWM convention;
- G8 Approval of ballast water management systems;
- G9 Procedure for approval of ballast water management systems that make use of Active Substances;
- G10 Approval and oversight of prototype ballast water treatment technology programmes;
- G11 Ballast water exchange design and construction standards;
- G12 Design and construction to facilitate sediment control on ships;
- G13 Additional measures regarding ballast water management including emergency situations;
- G14 Designation of areas for ballast water exchange

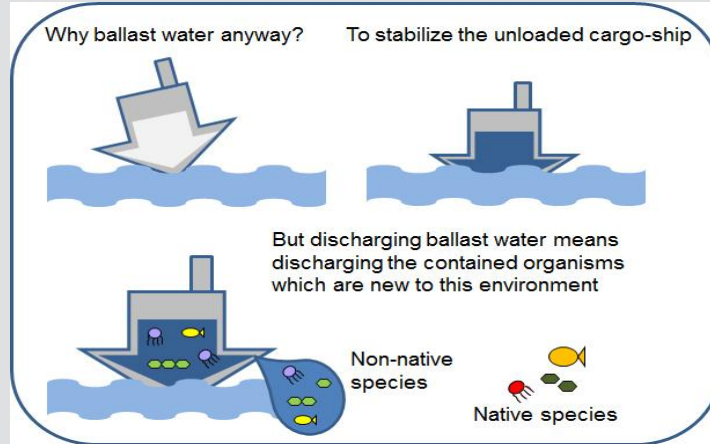


### ► **Compliance Stages:**

There are many stages to compliance and ship-owners are urged to start familiarizing themselves with the requirements of the Convention if they have yet to do so.

The cost of compliance is very high and the necessary finance will therefore need to be organised.

A ballast water treatment system can cost from half a million to four million dollars. In addition to the cost of the actual system, there will also be ancillary costs such as the cost of developing a ballast water management plan, dry-docking cost and installation costs.



The following steps are briefly discussed here:

1. Understanding the standards of compliance
2. Develop a ballast water management plan
3. Select and install a ballast water treatment system
4. Develop training for ship's staff
5. Survey, certification and inspection

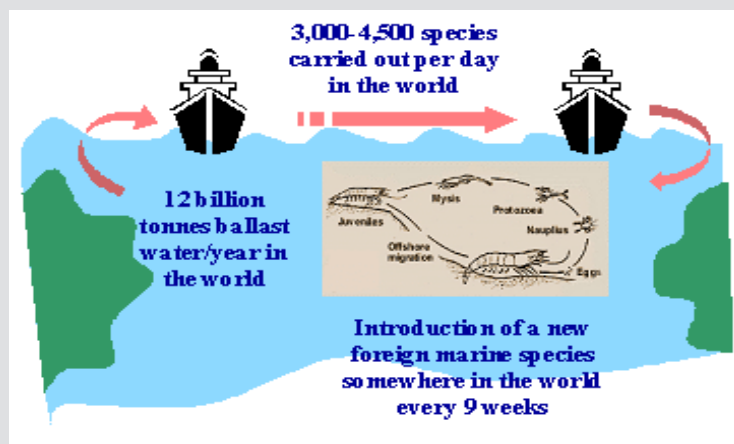
**1. Understanding standards of compliance:**

Regulation B-3 of the Convention sets out a time table for the application of two standards of compliance to different categories of ships, based upon the date of construction of the ships and the ballast water capacity of the ships.

These two standards are set out in Regulation D-1, a ballast water exchange standard (BWE), and Regulation D-2, a ballast water performance standard (BWP). The BWE standard does not require the ship to install a treatment system whereas the BWP standard does. The BWE standard is intended to be an interim standard only and will be phased out by 2019.

Regulation B-3 allows for alternatives to the BWE and the BWP methods provided that these alternative methods ensure at least the same level of protection to the environment, human health, property or resources and are approved in principle by the MEPC.

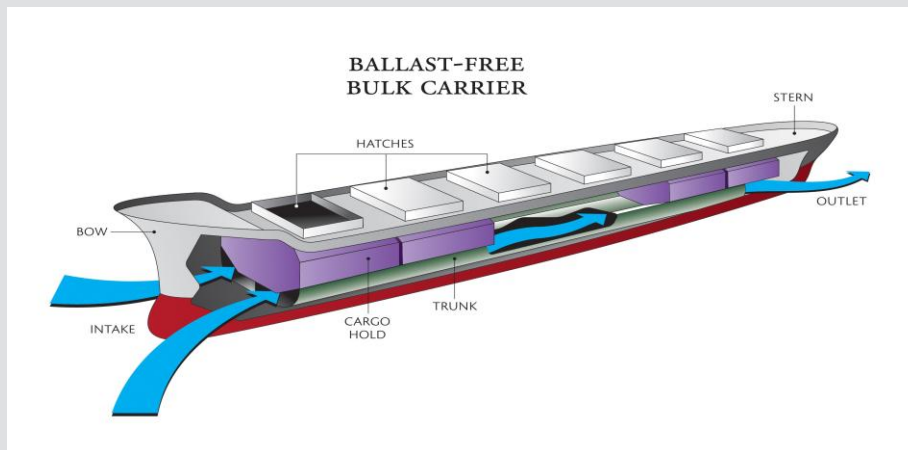
Parties to the Convention can, individually or jointly with other parties, impose additional measures on ships to prevent, reduce or eliminate the transfer of harmful aquatic organisms and pathogens through ships' ballast water and sediments. The IMO must be notified of any intention to establish additional measures at least six months prior to the projected date of implementation of the measures when appropriate, the IMO approval of such measures must be obtained. Adjoining or nearby states that may be affected by such standards or requirements should also be consulted.



It is important for ship-owners to note that a ballast water management system (“BWMS”) complying with the D-2 standard may still fall foul of more stringent standards set in other jurisdictions such as the US. Ship-owners who trade to these jurisdictions must therefore install systems that can achieve the higher standards set in these jurisdictions.

As the Convention is not yet in force, the time table for compliance in Regulation B-3 cannot be enforced, and it was unclear until very recently how this time table would be enforced once the Convention comes into force.

The MEPC 652 has however now agreed a revised schedule of implementation and all States have been recommended to work to this revised schedule.



**2. Develop a Ballast Water Management Plan:**

The Convention requires each ship to have a ballast water management plan (“Plan”) which is tailored to the particular ship. A standard format for such a plan is provided in the guidelines (G4). The Plan should include a description of the ballast system and how the system is to be operated, safety procedures for the ship and crew and details of the procedures for managing ballast and sediment onboard and for the disposal of sediment.

The Plan should also include the name of the designated Ballast Water Management Officer. The responsibility of this officer is to ensure that the details of all ballast water operations are recorded in a Ballast Water Record Book (“the Record Book”).

Such details should include the circulation or treatment of the ballast water for ballast water management purposes, any discharge into the sea or to a reception facility and any accidental or other exceptional discharges as well as any exemptions granted.

The Plan should be simple, realistic, practical, and easy to use and understood by ship’s personnel engaged in ballast water management on board and ashore.

The Plan is to be written in the working language of the crew. If this is not English, French or Spanish, then the Plan is to include a translation into one of these languages.

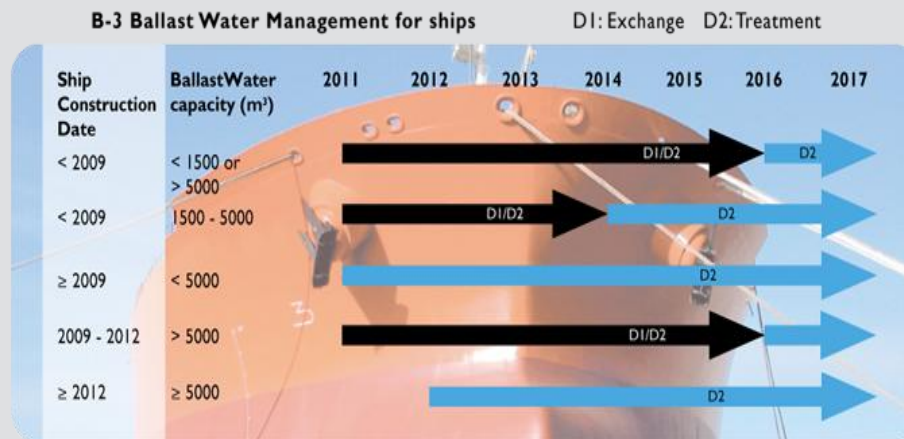
Once the Plan is completed, it will have to be approved by the Administration or a recognized organisation (such as Class). The MEPC 644 has agreed that once a Plan has been submitted for approval and the ship-owner has received a statement confirming receipt, the ship can trade for up to three months from when the Convention comes into force with an unapproved Plan on board.

Countries including Australia, Brazil, Canada, New Zealand, Norway, Ukraine and the USA have implemented national legislations requiring ships entering their waters to have approved ballast water management plans.

It is hoped that once the Ballast Water Management Convention 2004 comes into force, all these local provisions will be harmonized along the provisions of the Convention.

Both the Plan and the Record Book must be kept onboard and be readily available for inspection by authorized officers.

## Shipowner Responsibility BWM Timetable



### 3. Selecting a Ballast Water Treatment System:

Today, with over 30 'type approved' treatment systems available, the dilemma facing ship-owners is a rather different one, i.e. how to choose a system from amongst the many available?

A ballast water treatment system ("BWTS") may use active substances (defined as substances or organisms that have a general or specific action on or against harmful aquatic organisms and pathogens), chemical disinfection (e.g. chlorination, ozonation) or physical disinfection (e.g. UV irradiation, heat, and deoxygenation).

Regulation D-3 stipulates that ballast water management systems must be approved by the Administration, taking into account the Guidelines for approval of ballast water management systems (G8).

A G8 type approved system must be capable of achieving the standard of Regulation D-2 in land based and shipboard evaluations throughout the life of the ship and it must not cause unacceptable harm to the ship, crew, the environment or public health. In many countries the type approval of BWMS has been delegated to classification societies.

Type approval is not however an indication that the system will work on all ships or in all situations.

Regulation D-4 provides ships participating in a programme approved by the Administration to test and evaluate promising prototype ballast water treatment technologies with a leeway of five years before having to comply with the requirements in regulation D-2.

A ship-owner will be constrained in his choice of a system by considerations such as availability of space onboard, sufficiency of energy required to operate the system, compatibility of the system with existing systems on board, safety of the system for the trade engaged in, safety of the crew, the time available for operating the system in the particular trade as well as the time for and the cost of installing the system.

Depending upon the compatibility of the selected system with the system already on board, two to eight weeks may be required for installing the system and such time will need to be found in the ship's trading schedule.



**4. Development of training programmes for ship's staff:**

Once a BWTS has been selected and fitted, the ship-owner must ensure that the crews are properly trained to operate the system. The Convention requires officers and crew to be familiar with their duties in the implementation of ballast water management for the ship on which they serve.

A detailed staff training scheme will need to be developed and included in the ballast water

management plan. The master must ensure that the Plan is clearly understood by the appointed Ballast Water Management Officer and by any other ship's staff and personnel that may be involved in managing the ballast water management system.

The crew must understand the requirements of the Convention and be trained in their obligations under the Convention.

**The training programme for the crew should include but not be limited to explanations on:**

- **The need for ballast water and sediment management,**
- **The need for record keeping,**
- **The ballast operations on board the ship,**
- **The maintenance of the installed ballast water management system,**
- **The safety aspects associated with the particular system,**
- **The procedures used onboard the ship which may affect the safety or human health of the crew and passengers and/or the safety of the ship,**
- **The need to take precautions for entering tanks for sediment removal,**
- **How to handle, package and store sediment safely,**
- **The ship/ port communication interface, and**
- **The need to have an understanding of local disposal facilities and regulations.**



**5. Survey, Certification and Inspection:**

The flag state will require the ship to undergo a number of surveys to show that the ship's construction, equipment and management system all comply with the Convention's requirements. Details of these surveys are to be found under Regulation E-1.

**5.1 Initial survey:**

Once all preparations for compliance are complete, an initial survey of the ship has to be arranged for the approval of the BWMS.

This survey is to verify that the ballast water management plan and any associated structure, equipment, systems, fittings, arrangements and material or processes comply fully with the requirements of this Convention.

If the initial survey is satisfactory, an International Ballast Water Management Certificate or Certificate of Compliance is issued to the ship.

**5.2 Renewal Survey:**

The flag state may specify for a renewal survey to be held at intervals not exceeding five years to verify that the ballast water management plan and any associated structure, equipment, systems, fittings, arrangements and material or processes all comply fully with the requirements of the Convention.

**5.3 Intermediate survey:**

This survey will take place within three months before or after the second or third anniversary date of the compliance certificate to ensure that the equipment, associated systems and processes for ballast water management fully comply with the applicable requirements of the Convention and are in good working order. This survey shall take the place of one of the annual surveys.

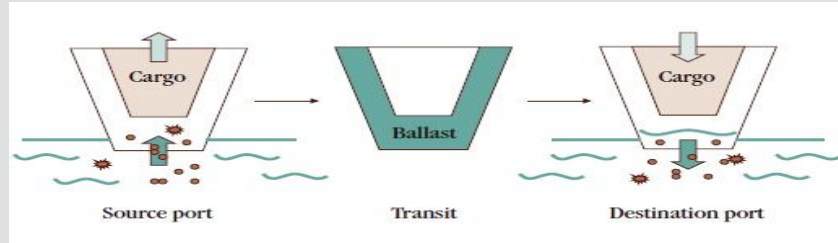
**5.4 Annual Survey:**

The annual survey is to be carried out within three months before or after each anniversary date.

This survey will include a general inspection of the structure, any equipment, systems, fittings, arrangements and material or processes associated with the ballast water management plan to ensure that they have been properly maintained and remain satisfactory.

**5.5 Additional Surveys:**

This can be a general or partial survey made after a change, replacement or significant repair to the BWMS to ensure that such has been carried out correctly.



### 5.6 Port State Control Inspections:

Port State Control officers can inspect a ship to verify that the ship has a valid certificate, inspect the ship's Ballast Water Record Book and/or sample the ballast water. If any concerns are raised, a detailed inspection may be carried out and the Party carrying out the inspection shall take such steps as will ensure that the ship shall not discharge ballast water until it can do so without presenting a threat of harm to the environment, human health, property or resources.

It is provided in Article 12 that all possible efforts shall be made to avoid a ship being unduly detained or delayed, and in the Guidelines (G2) that the time needed for analysis of samples shall not be used as a basis for unduly delaying the operation, departure or movement of the ship.

Article 12 goes on to provide that when a ship is unduly detained or delayed, it shall be entitled to compensation from the Port State carrying out the inspection for any loss or damage suffered.



### ► What happens when the convention comes into force?

#### Ship-owners' concerns:

Ship-owners have many concerns about the Ballast Water Management Certificate and how it will affect them once it comes into force. The following concerns were among those highlighted in a paper submitted to the MEPC 64.

- Uncertainty over how the implementation schedule in the Convention would apply once the Convention comes into force. Until the Convention actually comes into force, the

implementation schedule in Regulation B-3 can neither be enforced nor amended.

- Would the implementation schedule become mandatory retroactively requiring existing ships to retrofit ballast water management systems?
- Will the type-approved BWTS actually work once it is installed? Are the tests criteria for these systems sufficiently rigorous?
- Many questions about the taking of representative samples and the accuracy of sample analysis remain unanswered. There is the potential for samples taken from type-approved BWTS to be non-compliant.

- Are there enough yard facilities for installing the BWTS?
- How will sanctions under the Convention be applied? Party States will be responsible for enforcing the Convention in respect to ships registered under their own flags and ships entering their jurisdictional waters. The Convention provides for ratifying States to establish sanctions under the laws of the States which laws should be adequate in severity to discourage violations. The concern is that there will be no uniform application, interpretation and enforcement of the Convention requirements or a standard level of sanctions imposed by Party States.
- Will the Convention apply automatically or will each State Party to the Convention have to pass a domestic law to bring the Convention into force? If the latter is the case, then the Convention will come into effect at different times in different states.

*The MEPC 65 (13 -17 May, 2013):*

The MEPC 65 has sought to address some of the above concerns and challenges. It has now agreed to a rescheduling of the Convention implementation dates, a trial period for port state control and new guidance on BWMS type approvals.

The new installation schedule is pinned to the entry into force date of the Convention. It considers all ships constructed before entry into force as existing ships. These existing ships will then have until their first renewal survey (see above) after the Convention enters into force to install a BWMS. This will facilitate the smooth implementation of the Convention.

The revised schedule is detailed in an IMO Resolution which is expected to be adopted only at the IMO Assembly in November 2013. It is, however, largely understood that this final draft will be unchanged. All governments are recommended to use the revised scheduling as opposed to the scheduled dates in the Convention.

This rescheduling avoids legal problems associated with revising a Convention which has yet to enter into force.

To overcome some of the concerns and challenges mentioned above such as the lack of available yard facilities, the robustness of the type approval system, and the readiness of the port state control enforcement (sampling and testing) regime; A trial period for port state control and sampling has also been agreed. Port State Control will refrain from detaining a ship or taking criminal sanctions in the event that a BWMS does not meet the discharge standards.

This will allow time for Port State Control to determine which sampling and testing techniques work in practice and will also allow the industry to identify any further problems associated with the operation of type approved BWMS.

The type approval process is also to be made more transparent. Amendments may be made to the type approval certification documents and to the guidance to Administrations on the type approval process. This will make available more information to the industry and to ship-owners on the capabilities and limitations of the BWMS and the conditions in which the systems can operate.

**► Conclusion:**

There is strong support for the Ballast Water Management Convention because the evidence of damage caused to the environment by invasive alien species, the adverse effect this has on human livelihoods such as depleting native fish stocks, and the high cost of controlling the adverse effects can no longer be ignored.

However, the high economic costs to ship-owners introduced by this Convention coupled with a lack of confidence that the equipment and procedures proposed by the Convention can actually effectively overturn the abovementioned adverse effects probably explains why the rush to ratify the Convention has recently slowed down.

The Convention is nevertheless expected to come into force in the not too distant future. Whilst the MEPC 65 and the revised implementation schedule have now given ship-owners some breathing space, it would still be prudent for ship-owners to start getting to know the requirements of the Convention if they have yet to do so, so that they do not find themselves unprepared when the Convention comes into force.



