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PROPOSED BALLAST WATER MANAGEMENT UNDER MARITIME ADMINISTRATIONS IMPLEMENTATION OF THE CONVENTION

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ABSTRACT

When the ballast water management convention (BWMC 2004) enters into force it is appraised nearly 70000 ships will need ballast water treatment system. The aim of this paper is to justify plan of action to develop an enforcement regime for the ballast water management convention, moreover highlight the challenges which may be faced. Certification examining to BWMC D-2 regulations has included both land-based and shipboard tests by a small number of test appliances throughout the world. Compliance testing for enforcement objectives under the guidance of port state control will comprise dead/live amount of remainder organisms of various size categories in treated ballast water. Enormous numbers of vessels entering hundred ports extending throughout the world and the restricted resources for extensive examining, it is unavoidable that more restricted tiered process to compliance enforcement will be needed.

KEYWORDS: Ballast Water Management, Ballast Water Sampling, Compliance and Enforcement, Flag State, Port State Control, Reporting

INTRODUCTION

Through the previous thirty years, ships' ballast water has been distinguished as one of the main reasons for the tender of damaging aqueous creatures and pathogens into aqueous environment and the tendering of invasive species was identified as one out of four greatest menaces to marine environment.

IMOs' movements to handle this problem contained the evolution of a regulatory regime concluding in the issuing of the International Convention for the Control and Management of Ship's Ballast Water and Sediments in February 2004(BWMC). (Transport Canada, 2012)

The plan of action which will be used to develop an enforcement regime for the BWMC requires that ships come to water under various jurisdictions to carry out ballast water exchange in open sea, or in particular substitution areas chosen for their salinity and depth, hand over ballast water to a reception facility, retain of ballast water on board the ship, or install ballast water treatment technology.

According to the convention, ships must manage their ballast water and explicitly restrict the number of organisms they release in that water. With a view to respond to the conventions' performance standard, a lot of ships will ultimately be required to install a ballast water treatment system to strain or ban the wide majority of organisms in their ballast tanks. By ratification of the convention, particular commitments should be taken on, like for example to implement the international performance standards to ships recognized by the convention, to go after particular procedures in approving the application of treatment systems, to survey and certify compliance and to finish the transformation to the performance standard in accord with agenda that is designated to enable for regular implementation by parties to the

convention.

There are particular restricted rights to extend extra time for ships to comply with the conventions' performance standard. Also, there are prerogative to enforce more strict obligations than the regulations as required so as to protect the environment (refer to convention article 2.3).

According to the convention, ships flagged to parties of the convention are also liable to its provisions when in waters under various jurisdictions. By ratifying, they have also the right to apply "no more favourable treatment" to ships of non-parties. This force all other ships, involving foreign flag ships that transit our waters, to engage in the convention process while in water under our jurisdiction. (Gollasch, 1997)

The conclusive components of the convention are: the staged submitting of stringent performance standard for ballast water discharges, demanding the fitting and employ of on board treatment systems; and a structure for parties to the convention to apply enforcement action in reply to violations of regulations. (MAF- New Zealand, 2013)

When the convention enters into force, the recommended regulatory process would request that most of domestic and foreign ships navigating in jurisdictional waters comply with its measures. Remarkable issues that contained in the convention provisions to:

- Deal with requirement and have a valid Ballast Water Convention certificate,
- Have a ballast water record book on board,
- Have an approved ballast water management plan, and
- Deal with the exchange and performance standards of the convention as appropriate.

(Transport Canada, 2012)

As a party to the convention, the governments will be in charge of enforcing it to flag-registered ships and to ships navigating in jurisdictional waters. Specially, establishing sanctions for any violations of the requirement of the convention by flag registered ships, wherever such violation happens. Furthermore, they will establish sanctions for any violation of the convention with in their jurisdiction.

Port State Control (PSC) will perform an important role in the enforcement of the convention. Especially, for the objective of emphasizing that they comply with the convention. That inspection may contain inquiry of the presence on board of a valid BWM certificate, inspection of the ships' ballast water record book and sampling of the ships' ballast water. These officers may also request a more detailed inspection if they recognize any matters, specially, if the ship does not carry a valid BWM certificate and/or the crew are not qualified or have not implemented essential ballast water management procedures. In any case, the PSC officers may ban the ship from discharging any ballast water till they are convinced that it is safe to do so.

(Royal & Apostolatou, 2013)

There are many challenges which may prevent the optimum enforcement of the convention, such as financial aspects, political aspects and training of port control officials, approving of type approval system, the sampling process and the establishment of national policy and legislation.

THE OBLIGATIONS ENFORCED BY THE CONVENTION

General Obligations

Parties to the convention must fully and completely implement the procedures of the convention and its annex. Parties have the right, anyway, to apply strict procedures than those included in the convention to impede, decrease or remove the transfer of harmful aquatic organisms and pathogens, only if these are firm with international law.

Parties must guarantee ballast water management activities do not raise more harm than they hinder to their environment, human health, property or resources, or those of other States. Parties should attempt to collaborate for the objective of efficient application, compliance and enforcement of the convention.

Flag State Obligations

Parties must demand ships that are bound by the convention to consent with the conventions' requirements, involving the appropriate standards and requirement in the annex. Compliance by ships with the conventions' requirement should be accomplished by, in addition to other things, the certification and surveying of ships and by setting sanctions under domestic law for any violations of the convention.

When a party is notified of a violation by one of its ships, it must investigate the matter. If adequate evidence is available to allow procedures to be brought, the party must start taking procedures as early as possible, according to its legislation.

Port State Obligations

Parties must improve plan of actions, Guidelines and plans for ballast water management in their jurisdictional waters and ports that match with the aim of the convention. Specially, port States must guarantee that appointed ports and off-shore terminal have sufficient sediment reception facilities.

Costal and port States must set up sanctions for any violations of the convention that take place within their jurisdiction. When a violation happens inside its jurisdiction, a party has the choice to take procedures according to its legislation or give information and evidence identified to the violation to other State that the ship is entitled to fly its flag.

Inspections may be carried out at the petition of other party with adequate evidence with relation to the present or past performance of the ship in violation of the convention.

Where a violation of the convention is discovered, the ship may be warned, detained, or rejected from entering a port. A ship will be banned from discharging ballast water where the ship ballast waters' sampling results show that it present harm to the environment, property, natural resources or human health.

Enforcement procedures should be carried out in order to prevent a ship being unduly delayed or detained. Compensation should be attainable where there is undue detention or delay.

BALLAST WATER EXCHANGE STANDARD

Ship owners are requested to carry out water exchange; the approach does not request ships to change their purposed route in order to comply.

BALLAST WATER PERFORMANCE STANDARD

Recommended methods for compliance with ballast water performance standard will contain keeping of ballast on-board, discharging ballast water to reception facility, or treatment using a shipboard treatment system.

BALLAST WATER MANAGEMENT PLAN

Most of the administration is offering to give approval of management plans to classification societies. The plan should be amended as needed (e.g. when change from the exchange of ballast water to the performance standard) and amendments would require re-approval. It is significant to observe that the ships' obligation to keep in good condition and implement an approved management plan that is separate from the ships' obligation to follow ballast waters' exchange performance standard.

BALLAST WATER TREATMENT SYSTEM

The convention requires that flag registered ships applying treatment systems should carry our type approval certificate for the treatment system. Administrations may authorise classification societies to issue these certificates.

A system must be type-approved to be employ on board ships merely if it completely complied with Guideline G8 of the convention. (Guidelines for approval of ballast water management systems).

A definition of compliance should take into consideration:

- Test outcomes and documentation exhibiting sticking to the provisions in Guideline G8,
- Another State issuance of a type approval certificate in agreement with Guideline G8 on the grounds of public and transparent test results and documentation, or under the suggested regulatory approach, issuance of a certificate would be rejected or an issued certificate should be postponed or cancelled when a treatment system did not obviously and conspicuously match with the requirements of Guideline G8 or was appeared not to match with the performance standard.

PROTOTYPE TREATMENT SYSTEMS

Regulation D-4 of the convention establishes requirements for performance of prototype ballast water treatment technologies. Ships vigorously participating in a program from their administration to appraise favourable treatment technologies may get a five-year extension to the timeline fixed by the convention for following the performance standard. In accordance with the convention, ships must identify appropriate programs of other countries, as long as the ship is holding a proper Statement of compliance from its flag administration and the five year extension window has not passed.

BALLAST WATER SPECIFIC SURVEYS AND CONVENTION CERTIFICATION

According to the convention, ships are obligated to have a certificate to operate. For foreign flag ships, convention certificates will be accepted as proof of the required surveys. For ships of non-party States, an equivalency certificate is required that exhibit the ship has been surveyed and has an approved management plan that respond to the convention provisions. Administration may delegate surveying work to classification societies.

RECORD KEEPING AND REPORTING

According to the convention, ships should have records of their ballasting practices in a ballast water record book. It should include of every handling about ballast water. This contains records of all ballasting, exchange, treatment, circulation and discharge, and also causes of any unusual or accidental discharge. Ships liable to an extension should record this in the record book. Records in this book must be kept for entire five years, and be attainable on board for not less than two years.

(MAF, New Zealand, 2007)

COMPLIANCE AND ENFORCEMENT

Flag administration: issues type approval certificates for treatment systems, endorse ship particular management plans, and issues certificates required by the convention to ships according to survey requirements.

Port administration: guarantee that ship acts according to its obligations in waters of that administration.

Administration Planned Approach to Compliance and Enforcement

Administration will carry out compliance and enforcement actions in conformity with its policy on compliance and enforcement. The policy should set serious sanction for violations of the convention.

Administration anticipates guiding ships to correct deficiencies in procedures or equipment prior discharging ballast water, for example by applying another method of ballast water management if necessary. Administration is taking into account supplementing extra measures to the regulations that should need a ship to take corrective action if guided by inspector to correct a violation, therefore eliminate the release of possibly invasive species.

In addition to scientific objectives, administration expects carrying out full scale biological sampling of ship discharges merely in occasions when there are definite grounds to doubt violation of the convention. In accordance with the conventions' Guideline G8, a treatment system can contain bypass valves that enable the system to be separated in any emergency. The submitted regulatory approach should need that, when a ship is provided, operation of valves should activate an alarm and be recorded in the control system of the treatment system; when this were not the situation then no discharge would be permitted in sea water.

(Transport Canada, 2012)

Serious civil and criminal sanction should be enforced against violators of the ballast water management procedures. Sanction for failure to comply with the reporting, sanctions connected to record keeping are other deterrent to ships taking into account avoiding ballast water management procedures. The principal method of monitoring and enforcement is to examine the records that ships are required to keep in good condition. When PSC officers carry out an inspection to a ship, they examine various aspects of ship safety and legislative matters, containing ballast water treatment measures. To define if ballast water has been treated, the PSC officers will check the record book to verify all treatments were recorded, appraise the crews' capability to use the treatment system, and inspect the treatment devices to find out whether it is being kept in good condition.

If it is obvious that the equipment is not being used, more comprehensive inspections will be carried out. Ships that have been quoted for violations before will get more comprehensive detailed inspections for their equipment to

guarantee they are no more violations. In the case violations are found, the PSC officers will issue criminal pursuit of the ship.

(USCG, 2012)

THE CHALLENGES WHICH MAY BE ENCOUNTERED DURING ENFORCING THE BALLAST WATER MANAGEMENT CONVENTION

Financial Aspects

Financial issues in regard to the foundation and execution of ballast water treatment and reception facilities. The development of an inspection authority (e.g. need for new equipment to be used during the Port State Control inspection) as the administration will manage the implementation of proper management alternatives regarding ballast water on visiting ships. But expenses for the execution and supervision of ballast water treatment strategies will bring benefits particularly to mariculture and touristic industries.

(Gollasch, 1997)

Political Aspects

There is a need to hinder a decline of ships calling for ports where the convention will be implemented on a compulsory basis when at the same time neighbouring States should not demand any ballast water management provisions.

(Gollasch, 1997)

Training

The training of Port State Control officials is one of the mainly significant interests of ballast water management system. It is a sophisticated process and training largely influences the whole accomplishment of the implementation of the convention.

(Olgun, Karakoc & Haag, 2013)

Type Approval System

There has been important step which is the on board Port State Control inspections by an enforcement officials, in addition to standard PSC activities, who would confirm the certified treatment systems' use, a proper performance and record keeping. Additionally, more challenges have appear, that the type approval system is not vigorous completely to guarantee that the treatment system successes the compliance test in port.

(Minkelis, 2013)

Sampling

Ballast water sampling could be carried out to appraise compliance with ballast water management requirements. Sampling methods of ballast water are not at all being sufficiently tested and it continues therefore vague how representative the sampling results are.

Sample representativeness is very significant but we do not know:

- The best appropriate sample taking point.

- The frequency of sampling.
- The amount of water to be sampled, etc.

As there is no uniform ballast water sampling methodology, so, this impact on the compliance controls samplings, i.e. lacking of uniform sampling methodology for a particular ship can be in compliance in one port, but not in another.

(Gollasch&David, 2011)

National Policy and Legislation

In order to prepare for conventions' implementation, this contains establishing an efficient regulatory system involving policy and legislation procedures. Before starting this procedure, we should have comprehensive understanding of the current national regulatory structure, and, especially those issues that are related to ballast water management.

(Gollasch, 1997)

CONCLUSIONS

Ballast water is needed for the stability and safety of ships, but when loaded, it picks up aquatic species. Therefore, discharging of it without a proper management procedures is a common way that possibly invasive species may be entered into sea water.

Obligatory regulations and/or Guidelines reducing the entry of invasive species should be of great assistance to stop non-required introductions of damaging species. So, it is concluded to enforce the implementation of this regulations and Guidelines in a worldwide level.

It is concluded that numerous States do not regard the ballast water matter as a great problem. So, additional actions must include the domain of public awareness.

The significance of ballast water management and supervision as a ways of human interference to guarantee the stability of aquatic ecosystem and biodiversity is not usually recognized. As soon as possible, participation of all concerned authorities and parties is required to implement and improve the regulations and Guidelines effectively. National approaches of this global scale issue should finish in complicated regulations causing difficulties in compliance. Verification procedures for the compliance with the regulations and/or Guidelines are required to guarantee the application of these procedures.

International collaboration is required, because the issue of introduced species will continue at boundaries. Co-operational activities in the domain of ballast water management should assist to stop replication of work. This would stimulate developed States to give technical and legislative advices to developing States.

When applying ballast water management convention, states will gain three main advantages. First, they will be able to guarantee that foreign ships transporting our merchandise sufficiently guard the environment as they discharge overseas ballast water when loading cargo in their ports. Second, it gives assertion that their ships visiting other States will be acceptable around the globe. Third, it grants them a sound in international standards for ballast water management, compliance and enforcement to guarantee that ballast water provisions are efficient, applicable and workable.

(Gollasch, 1997)

As a conclusion for the main outlook of the convention procedures for ships to:

- Improve an approved ballast water management plan,
- Go through surveys and hold certificates to present that the plan is being implemented.
- Have records for ballast water actions.
- Manage the discharge of ballast water.
- Firstly, performing ballast water exchange in the open seas when safety aspects permit, and
- Finally by carrying out a ballast water performance standard.

To the extent of that the ballast water management convention 2004 is anticipated to enter into force soon, the compliance, monitoring and enforcement problem becomes more and more important since clearly having BWMC in place is not sufficient to cover the problem of alien species. It is the obligation of the Port State Control authorities to enforce proper measures to guarantee that all ships apply a ballast water management plan so that the discharge standard is implemented. Actually, in the end all ships will be needed to have a ballast water treatment system except those given an exemption. It is absolutely easy to confirm if there is a treatment system on board the ship or not. On contrary, more enforcement efforts must be carried out to guarantee that the system already installed is working.

The Port State Control authority has to inspect regularly adequate amount by sampling the ballast water discharged and fine the ships that are discovered in violation. Ballast water sampling is not just taking a long time, but costly as well. The enforcement budget then restricts the inspection frequency. Therefore, although the customary compliance ideal aims at one hundred percentage compliance, the factual compliance ratio is distant away from that. (Transport Canada, 2012)

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