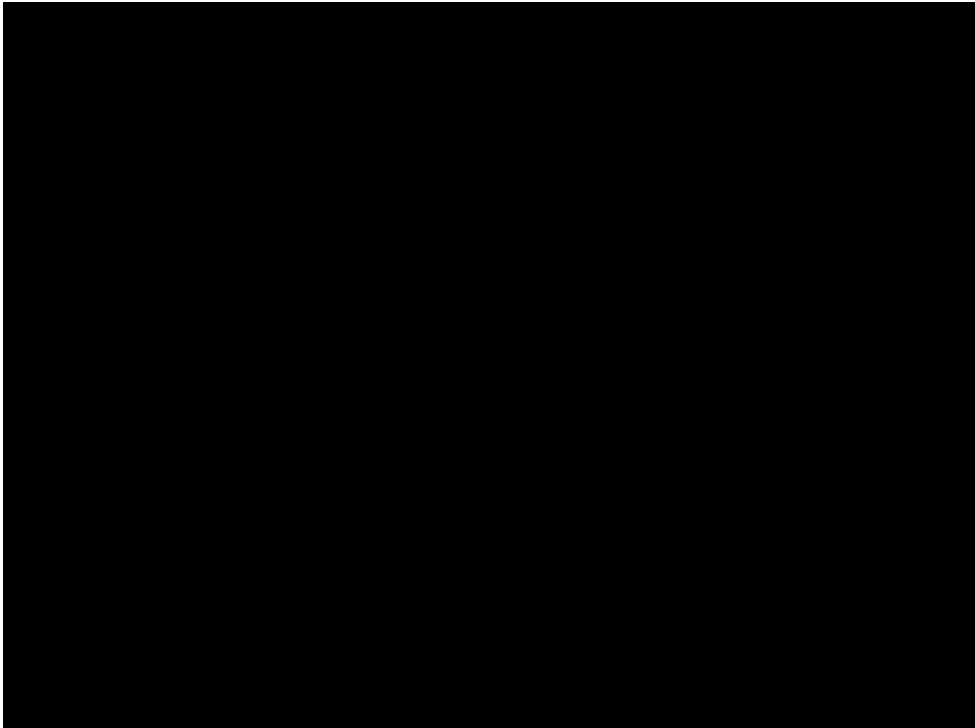




Ballast Water Management Latest Developments



John Emmanuel Kokarakis

Technical Business Development



Move Forward with Confidence



- ▶ Two standards to achieve the objectives of the BWM Convention:
 - a) Ballast Water Exchange Standard (based on dilution): D-1
 - b) Ballast Water Performance Standard (based on treatment): D-2

- ▶ Plan approval

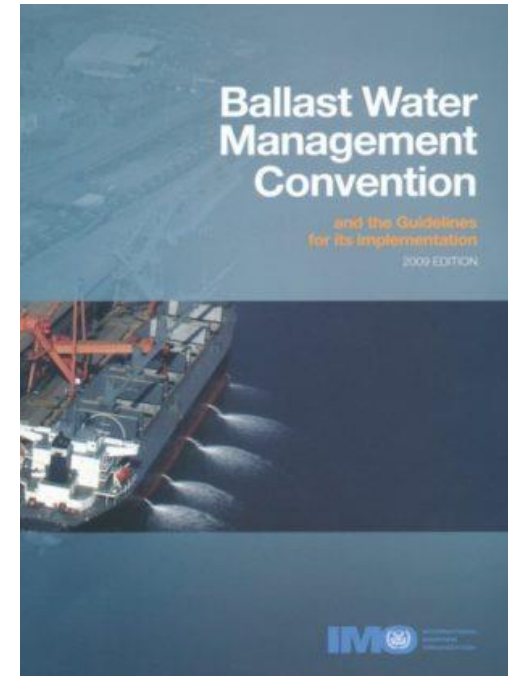
- .Review the ballast water management plan (BWMP)
- .Review the Ballast water exchange method, or
- .Review the design, construction and installation plans for BWMS

TARGET : All vessels to comply with D-2 by 2022



Survey & Certification

- ▶ Ships are required to be certified at the Entry Into Force date.
- ▶ Arrange initial survey prior to September 8 2017.
- ▶ This means that, at the Entry Into Force, EIF, ships of 400GRT and above will be required to have on board:
 1. An approved Ballast Water Management Plan (BWMP) (according to D-1 or D-2 Standard)
 2. A Ballast Water Record Book (BWRB)
 3. An International BWM Certificate (according to D-1 or D-2 Standard). If vessel's flag has not ratified BWM Convention, then a Certificate of Compliance



Ballast Water Management Plan

- ▶ IMO has issued BWM.2/Circ.40 which envisages the possibility of vessels trading with an unapproved BWMP for up to 3 months.
- ▶ BWMP must be submitted for approval by the RO prior to 8 September 2017.
- ▶ BWMP's approved in accordance with resolution A.868 (20) will remain valid until a Ballast Water Management System has been Installed which thus requires revision of the BWMP (MEPC.127(53))
- ▶ International Ballast Water Management Certificates (IBWMC) can be issued prior to the entry into force of the Convention.



Compliance with BW Convention

- ▶ IMO compliance is aligned with the IOPP renewal, whereas USCG with first dry-docking after EIF.
- ▶ Vessels are obliged to comply with D-1 (BWE Standard) from EIF to the D-2 compliance date.
- ▶ For new-buildings delivered after EIF, D-2 compliance date is the delivery date.
- ▶ If a ship undergoes a major conversion after EIF, it needs to comply with D-2 afterwards.
- ▶ MEPC 70 revised type approval guidelines G-8. This revision will be mandatory after October 28, 2018.

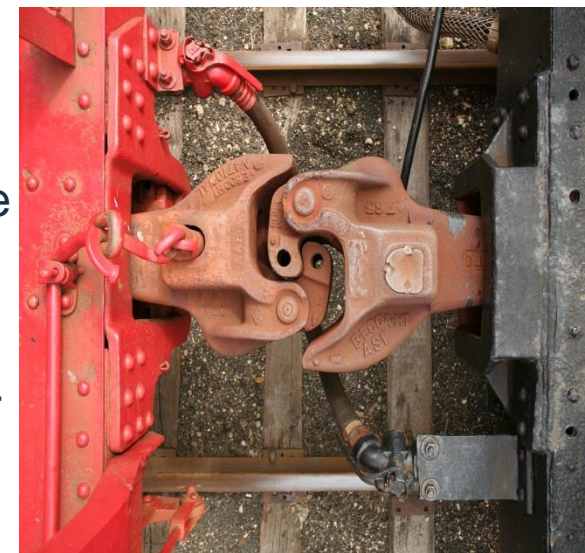


Compliance more...

- ▶ Water ballast carried in the cargo tank of an oil tanker is covered only by MARPOL Annex I and there is no need to be treated.
- ▶ Convention is open for exemption for vessels voyaging only between specified ports or locations within the same risk area.
- ▶ Convention allows the use of an electronic record book. Each entry must be signed by the officer in charge of the operation and each completed page is signed by the master. This may be done electronically.
- ▶ IMO has not yet established guidance for failures on the BWM treatment system (WMS failure, reception facility unavailable etc) This contingency plan is critical to the safe and efficient operation of the vessel.
- ▶ Ukraine has stricter requirements than the IMO convention (but no more Ecological Inspectors besides PSC). The water quality is tested for iron content, suspended organic material and oil products. The threshold levels for these parameters are low and difficult to comply with.

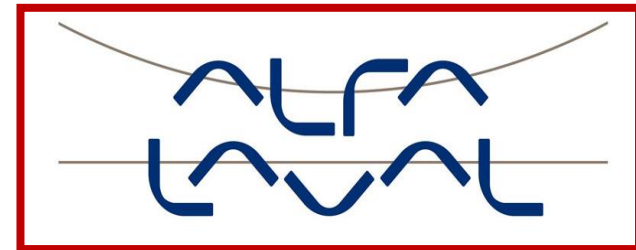
De-coupling of the IOPP Certificate

- ▶ De-Harmonization of Harmonized System of Survey & Certification (HSSC) to gain time.
- ▶ Uncertainty of treatment systems
- ▶ Not all Flags , ports may accept the de-coupling of the IOPP Certificate. Ship may be detained!!!
- ▶ In the event of flag change, new flag might not accept the decoupling.
- ▶ It is reminded that in tankers the mandate for loading computers is aligned with IOPP renewal surveys (after 1-1-2016)
- ▶ Flag must provide written acceptance of de-coupling.
- ▶ ***It has been proposed and it will be discussed at MEPC 71 (July 2017) that compliance should be extended at IOPP renewal after September 8 2019. Unfortunately this schedule has to be approved by MEPC 72 (May 2018)***



BWM in the USA

- ▶ USA has not ratified the convention. In the USA ships must comply with:
 - USCG Ballast Water Requirements
 - US EPA VGP
 - State requirements (16 states with Ca most stringent)
- ▶ USCG testing and approval lasts between 18 and 24 months.
- ▶ 2 UV and 1 chlorination system have been approved so far. Requests for extension can continue (e-mail: environmental_standards@uscg.mil) 12 to 24 prior to compliance date.
- ▶ Outcome of request for extension 3 to 6 months.
- ▶ EPA VGP does not accept the exceptions but it is a “low priority” enforcement item.
- ▶ Compliance options :
 - USCG approved System
 - Ballast Water Exchange
 - AMS by USCG
 - Treatment on-shore
 - Reception barge
 - No discharge of ballast
 - USA Drinking Water



BWM in the USA

► Reasons for extension:

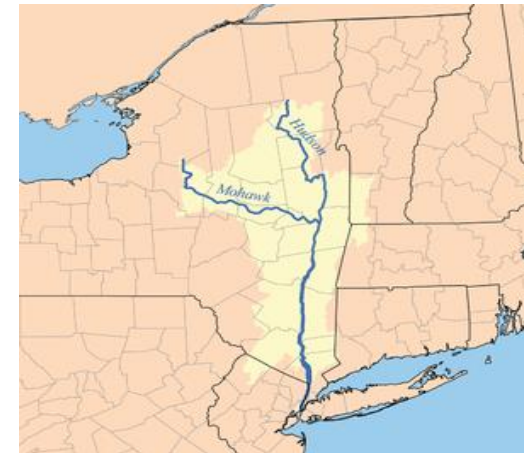
- Lack of dry-docking space (document)
- Availability of specific BWMS (document)
- Problems in purchasing, installation and commissioning (document)
- Difficulty to find suitable BWMS (document)
- Extensions trickle after the three type approvals. So far we have only denials afterwards.



► Vessels entering the Great Lakes or Hudson River need to report to arrival port 24 hours prior to arrival.

► USCG ballast reporting entered on the National Ballast Information Clearinghouse (NBIC)

<http://invasions.si.edu/nbic/submit.html>



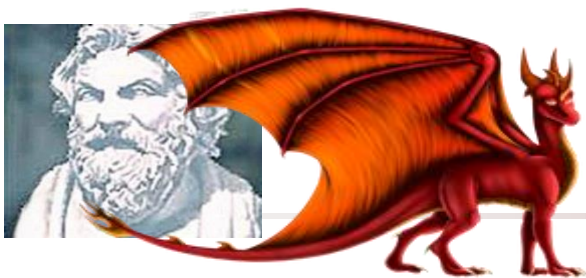
USCG additional requirements

- ▶ Clean ballast tanks regularly to remove sediments.
- ▶ Rinse anchors and chains when the anchor is retrieved.
- ▶ Remove fouling from the hull, piping and tanks on a regular basis.
- ▶ Maintain a BWM Plan that includes the above in addition to ballast water management (no requirement that the BWM Plan must be approved).
- ▶ Maintain records of ballast and fouling management.



California

- ▶ California Assembly Bill 1312
- ▶ Requirements more stringent than Federal
- ▶ At present not enforced. After January 1st 2020
- ▶ Final ballast standards January 1st 2030
- ▶ Authorized to take samples of BW, sediment, bio-fouling from 25% of vessels.
- ▶ Interim:
 - > 50 μm none to be detected
 - $50 > x > 10 \mu\text{m}$ less than 1000 bacteria in 100 ml and less than 10000 viruses in 100 ml
 - Escherichia coli < 126 cfu per 100 ml
 - Enterococci < 33cfu per 100 ml
 - Cholera < 1 cfu per 100 ml
- ▶ Final ballast standard : No organisms at all





BYE BYE



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