2019 Tripartite

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Ballast Water Management- Experience and Feedback by INTERTANKO members

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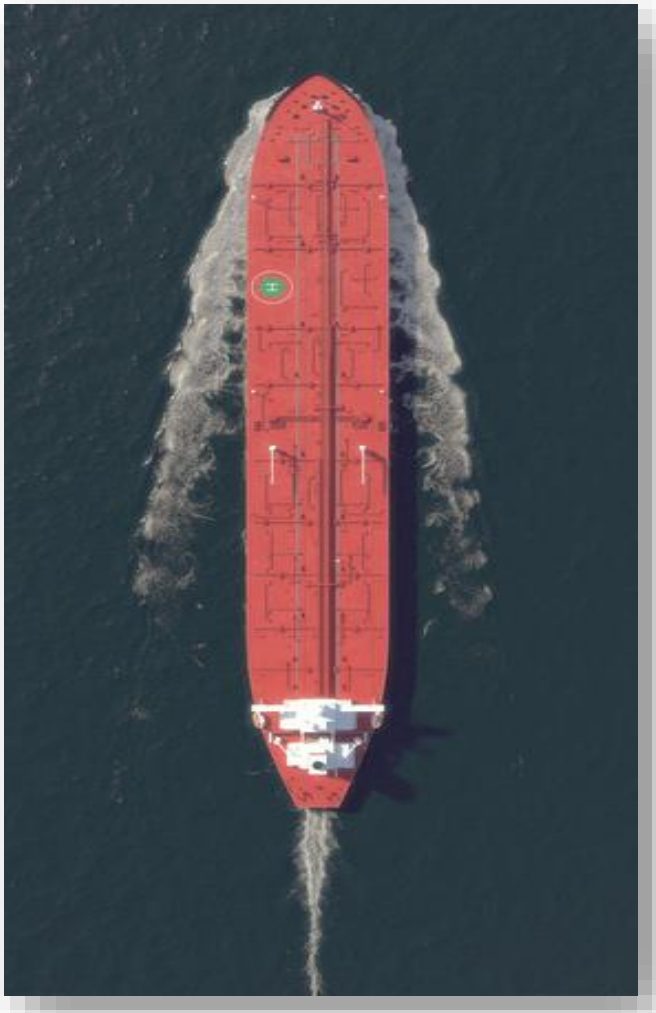

Agenda

Questions posed

- What are the issues/ challenges that the industry need to take note of to ensure that new vessels being built could easily comply with the requirements of the Ballast Water Management (BWM) Convention?

- Are there any technical wish-list that you would like shipbuilders to consider for building of new vessels?

BWM Issues/ Challenges

Overview

- Manufacturers are producing systems that do not meet user's needs/ requirements
  - Not all systems could be used in brackish waters
  - Some filters could only be used in clean waters

  Ballast Water Exchange could be a contingency plan if system fails to work

- Human Element should be factored in
  - Competency of crew to handle the systems
    - Training, familiarisation
    - Significant role on the overall performance of the system
    - On-board hands-on and compliance training

- Installation-related issues
  - disconnect between the owner, yard, BWMS manufacturer and the contracted engineering firm
    - Lots of last minute changes causing delays
      - Need to stick to agreed timeline and all parties to complete their tasks
    - Collaborative working relationships is critical

BWM Issues/ Challenges

Ballast Water Treatment Systems (BWTS)

- System Design Limitations
  - Manufacturers should be transparent to owners
  - Filters capacity and ability to maintain the nominated/design rate when operating in “heavy” waters
    - possibly the size of filters should be selected as oversized in order to be able to have some margin
  - UV systems could not be used in some ports because of water quality
- Reliability of components used
  - current experience indicates low reliability
  - Issues with UV lamps, filters vulnerable for damage
    - Lamps are brittle, challenging to change as they contain large amounts of mercury
    - Filters wear down too fast and easily damaged
- Critical spare parts to be listed and made known to owners
  - Type of parts that are critical to the operation of BWTS to be provided
- Redundancy built in the design
  - current experience shows that single failures set the system out of operation without the ability to restore it

BWM Issues/ Challenges

Ballast Water Treatment Systems (BWTS)

- Ignition of UV lamps
  - Some at 2000 and more than 3000 volts
  - Although class approved, concerns raised as some are located near to cargo.
- Technology is not matured
  - Manufacturers grappling with issues as more ships start using BWTS
- Integration of the BWTS with other systems (ballast pumps control, valve remote control and feedback from valves positions for the correct function of the BWTS, AMS & IAS)

INTERTANKO's "wish list"

- Increased reliability of selected components
  - establishment of criteria
- Built in redundancy and establishment of regulatory framework to form the design for the minimum criteria to be adopted into each system
  - in the same way Class Rules function
- Establishment of minimum design capacity for the filters
  - take into consideration oversizing for coping with "heavier" waters

<u>BWTS Testing</u>

- Indicative vs full tests
  - Detailed sample analysis help to ensure high reliability and relevance of compliance data for owner
  - Additional costs associated with detailed sample analysis is considered minor as compared to cost of representative sampling that is done for indicative tests.
  - Time required is comparable for both tests.

Thank you

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