2019 Tripartite

16-18 Oct 2019, Tokyo

Ballast Water Management - Experience and Feedback by INTERTANKO members

Elfian Harun
Environment Manager & Assistant Regional Manager Asia-Pacific
INTERTANKO
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?
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
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
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

BWTS Testing
- 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

environment@intertanko.com