Operational and Functional Experience with BWMS

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When a ship owner purchases a treatment system what do they expect?

- Consistently perform and able to meet the discharge standard;
- Operate reliably;
- Easy supply of parts and technical support;
- Uninhibited operation of ships ballast operations.
Ship owners and operators don’t necessarily share operational experience unless it is severe. IACS is aware of a few key operational challenges.

- Restrictions to “Normal” vessel operation;
- Maintenance challenges;
- Delays in obtaining parts, services;
- Installation, commissioning and training issues;
Restrictions to “Normal” Vessel operations.

Ships crews/owners expect the installed BWMS to not change how ballasting occurs. This isn’t always the case.

- Flow rate restrictions
  - Filters, maintain Differential Pressure
  - Ultraviolet transmittance (UVT)
  - System design limitations
- Gravity ballasting/eductor
- Power consumption
- Salinity restrictions
  - Physical / Biological conditions

Selecting a BWMS matches the ship’s need.
Maintenance challenges.

This relatively new equipment install and ships crews are expected to maintain it.

- Valves – automation, response time
- Control and purge air supply – air quality and consistency
- Hazardous Area – gas freeing
- Complex “unusual equipment”
  - Lamps – replacement, disposal
  - Total Residual Oxidants (TRO) monitor – regent change, shelf life
  - UVT, ultraviolet intensity (UVI) sensors – cleaning, zeroing
  - Other components – gas generators, conditioning units
Replacement parts are fundamental to good operation of the BWMS. However, it can be challenging to get them to the ship.

- Hazardous parts & consumables – logistical challenges
  - TRO reagent
  - UV lamps
- Spare part availability – production on demand, customised parts
- System upgrades – New components, recommissioning?
- System Service - Availability of service engineers
Installation, commissioning and training

Often installation, commissioning and training is all conducted at the yard for newbuild and split up for retrofits

- Quality of installation
  - Modular installation
  - Head space for servicing

- Software
  - Integration with ship control system
  - Software upgrades/ bugs

- Training
  - Rushed at installation
  - Perception ‘systems use similar technology are identical in operation’
THANKS