Classification Society Type Approval of Ballast Water Management Systems

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What is Type Approval?

● Ballast Water Management (BWM) Convention – Guidelines for Approval of Ballast Water Management Systems (BWMS) (i.e., G8 Guidelines):
  ■ BWMS Type Approval Certificate – “A BWMS which in every respect fulfils the requirements of these Guidelines may be approved by the Administration for fitting on board ships.”
  ■ Ability for BWMS to achieve Regulation D-2 (Ballast Water Performance Standard)

● USCG
  ■ Equipment complying with Engineering Equipment Standards in 46 CFR 162
  ■ BWMS able to achieve USCG requirements for performance and construction

● ABS Type Approval (Class)
  ■ IMO member state Type Approval is a prerequisite to ABS Type Approval
  ■ Equipment that conforms with specific ABS Rules and Guidelines
ABS Type Approval

- Ability for equipment to conform to ABS Rules
- Two step process:
  - 1 – Satisfactory evaluation of a product to ABS Rules or other approved standards is evidenced by the issuance of a Product Design Assessment (PDA) certificate
  - 2 – Satisfactory evaluation of the manufacturing facility and processes to confirm its ability to consistently manufacture the product in accordance with the PDA is evidenced by the issuance of a Manufacturing Assessment (MA) certificate
- Applies to many different types of equipment
ABS BWMS Type Approval

- BWMS and associated components can be consistently manufactured to the same design and specification
- BWMS must have received IMO member state Type Approval in accordance with the G8 Guidelines
- Voluntary option for the demonstration of compliance of a system or product with the Rules, Guides or other recognized standards
Benefits of ABS Type Approval

- Streamlined process for approval on ABS-classed vessels
- Ability for vessel to achieve voluntary BWT or BWT+ notation
Common Installation Criteria

- The treatment rated capacity (TRC) is to be sufficient to meet the ship’s ballast capacity and normal ballast operations rate.
- Capable of operating effectively at the minimum discharge rate of the ballast pumps or stripping system.
- Capable of operating effectively with all connected ballast system pumps and eductors.
- Capable of effectively treating all ballast water regardless of tank location, size or structure.
- Provide for ballast flow to the furthermost tank at maximum capacity stated in the ship’s BWMS specification.
- Does not adversely affect any parts, materials, equipment, structures or coatings.
Common Installation Criteria (continued)

- Does not exceed the electrical generating capacity of the shipboard power supply under all anticipated ballasting or de-ballasting operating conditions.
- Does not discharge hazardous vapors or byproducts to the atmosphere, other than as considered in the type-approval of the BWMS.
- All parts of the BWMS are to be easily accessible for inspection and maintenance.
- Has suitable bypasses or overrides to protect the safety of the ship and personnel in the event of an emergency.
- Complies with all limitations, requirements, restrictions and conditions identified in the Type Approval certificate issued by the IMO Member State.
Specific Installation Requirements

- Hazardous and non-hazardous locations
- Ventilation systems
- Structural considerations
- Corrosion effects
- Impacts on ballast system
- Electrical systems
- Instrumentation
- Specific requirements for the various types of technology
- Special firefighting equipment and arrangements
- Sediment control
BWMS with ABS PDAs & Type Approvals

- **PDAs**
  - BIO-SEA®
  - CrystalBallast
  - Cyeco
  - Ecochlor ®
  - Optimarin

- **Type Approval**
  - AquaStar™
  - BalClor™
  - BALPURE ®
  - GloEn-Patrol™
  - Hyde GUARDIAN™
  - NiBallast
  - NK-O3 BlueBallast®
  - OceanGuard
  - OxyClean
  - PureBallast 2.0/2.0 Ex
  - Purimar™
  - Techcross Electro-Cleen™
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