



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 furthestmost 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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