

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>Wartsila Water Systems Limited</b>
<b>Address</b>	Merchants House, Vanguard Road, Poole, Dorset, BH15 1PH
<b>Place of Production</b>	Wartsila Suzhou Limited No 77 Hong Xi Road, New District of Suzhou, 215151, PR China
<b>Type</b>	Aquarius UV Ballast Water Management System, AQ-50-UV to AQ-1000-UV
<b>Description</b>	UV irradiation type ballast water treatment system with filtration.
<b>Trade Name</b>	Wärtsilä Aquarius UV BWMS
<b>Application</b>	For treatment of ships' ballast water
<b>Specified Standard</b>	Lloyd's Register Rules and Regulation for the Classification of Ships July 2019 Part 5 and Part 6, as applicable. Environmental category ENV2 as defined in Lloyd's Register Test Specification No. 1, December 2020.
<b>Ratings</b>	Wärtsilä Aquarius UV BWMS AQ-50-UV, AQ-80-UV, AQ-125-UV, AQ-180-UV, AQ-250-UV, AQ-275-UV, AQ-300-UV, AQ-375-UV, AQ-410-UV, AQ-430-UV, AQ-500-UV, AQ-550-UV, AQ-750-UV, AQ-850-UV and AQ-1000-UV Wärtsilä Aquarius UV BWMS models suitable for installation in hazardous area are designated with the suffix X (e.g. AQ-1000-UVX).

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**Sahan Abeysekera**

Principal Specialist to Lloyd's Register EMEA  
A member of the Lloyd's Register group

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## Other Conditions

The intended installation location of the Aquarius UV Ballast Water Management System, AQ-50-UV to AQ-1000-UV is to be suitable and in compliance with the requirements for said location. The integration of the Aquarius UV Ballast Water Management System into the ship's systems, including piping, mechanical and electrical components and control engineering aspects, is to be shown on the ship's plans and submitted for approval. Manufacturer's instructions are to be followed.

The quoted specification for each discrete module (AQ module as listed in ratings) is based on technical documentation submitted by the manufacturer. Any deviations require submitting to Lloyd's Register for approval.

All components outside the scope of supply of Wartsila Water Systems Ltd. are to be of type complying with LR Rules and submitted for consideration prior to installation.

If remote control screen, which is optional, is to be located on the navigating bridge then the illumination and lighting from the screen are to be adjustable down to zero. Refer LR ship rules Part 7, Chapter 9, Section 2.3.2.

Where it is proposed to install equipment in an area where an explosive gas atmosphere may be present, it is generally to be of a type providing protection against ignition of the gases encountered and certification details are to be submitted for consideration, except those listed within specification.

The use of plastic piping is to be considered in accordance with the Rules for Classification of Ships, Part 5 Chapter 12 Section 5 and of a type acceptable to LR.

Installation, survey and commissioning is to be conducted for each installation in accordance with Section 8 of 'Code for approval of BWMS', flag specific requirements, if any, and Lloyd's Register specific survey requirements.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR21235447TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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