



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.

Manufacturer	Kongsberg Maritime AS
Address	Skonnertvegen 1, Ranheim 7053, Norway
Place of Production	Kongsberg Maritime AS Skonnertvegen 1, Ranheim, 7053, Norway
Type	Shaft Power Limitation System
Description	Kongsberg MetaPower Quad Shaft Power Limitation (SHaPoLi) System Main components within the system as below: Code wheel (NQ-045) High speed laser sensors (Model: NQB-101, NQB-102) Cabinet with HSIO-100-C (Torque processing module, web server and data storage) ShaPoLi Bridge Panel Shaft Power Meter Display for engine room (MFD7) OPTION
Trade Name	MetaPower Quad ShaPoLi
Application	For use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register Type Approval System Test Specification No.1, December 2021.
Specified Standard	1) Lloyd's Register Test Specification No. 1, December 2021. 2) Resolution MEPC.335(76)-2021 Guidelines on the Shaft /Engine Power

Yongchang Cai

Electrical & Control - Senior Specialist
to Lloyd's Register Canada Limited
A member of the Lloyd's Register group

Max Wu

Engineering - Power Generation - Lead
Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



Type Approval Certificate

limitation system to comply with the EEXI Requirements and use of a Power reserve taking into account IACS Rec. no. 172 (June 2022)-EEXI Implementation Guidelines.

Ratings

Cabinet with HSIO-100-C: IP65, 24V DC / 1A / 20W
High speed laser sensors: IP66 & IPX7, 24V DC / 33 mA / 0.8 W
ShaPoLi Bridge Panel: IP66, 24V DC

Other Conditions

- 1) Installation of this system onboard a ship is subject to the survey being successfully completed.
- 2) The SHaPoLi system should be accompanied by the ship specific Onboard Management Manual (OMM) which is subject to the approval on behalf of the ship's Flag administration.

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.

Previous Version: LR23326106TA

The Design Appraisal Document LR23326106TA-01 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.