Certificate No: LR2496066TA
Issue Date: 14/08/2024
Expiry Date: 13/08/2029

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	**Dalian Deep Blue Pump Co.,Ltd.**
Address	No.86, Xiwa Street, Ganjingzi District, Dalian City, Liaoning, 116031, China
Type	Submerged Pump
Description	Submerged Liquefied Gas Pump
Trade Name	Model RCMG 100
Application	Marine & Offshore
Specified Standard	Rule and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gaseds in Bulk (July 2023) 5.13.1.1 API 610 Centrifugal pumps for petroleum, petrochemical and natural gas industries IACL UR G3 Liquefied Gas Cargo and Process Piping
Ratings	Model : RCMG100 Capacity (m3/h) : 0 to 230 Head (MH2O) : 0 to 165 Rated Rev. (rpm) : 3600 (VFD Max. to 4200) Shaft Power (kW) : 0 to 79.5 Minimum Cavitation Allowance (NPSHr) : 0 to 0.6 Minimum Fluid Temperature : -165 ℃

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Minimum Temperature for tests and Commissioning : -196 ℃

Other Conditions

Materials
Casing : Al. Alloy Forging (B247 6061-T6)
Shaft : Stainless Steel (ASTM A705 XM-12)
Impeller : Al. Alloy Casting (B26 A356.0-T6)

Where the pump is intended to be supplied for a ship built or being built to Lloyd's Register (LR) class, the following information are to be submitted.
1. Individual product certificate
2. The records of hydrostatic test & the capacity test

The valid reports of the audit assessment of the Production Quality Assurance system (PQA) are to be retained for each place of production.

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 Group Ltd of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR2496066TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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