Certificate No: LR2042097TA
Issue Date: 23/10/2020
Expiry Date: 22/10/2025

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	**Kumkang Valve Mfg. Co.,Ltd.**
Address	193, Seongseodong-ro, Dalseo-gu, Daegu, 43013, Korea, Republic of
Place of Production	Kumkang Valve Mfg. Co.,Ltd. 193, Seongseodong-ro, Dalseo-gu, Daegu, 43013, Korea, Republic of
Type	Cryogenic Valves
Description	Top Entry Cryogenic Floating, Top Entry Cryogenic Trunnion
Trade Name	RBA15-2" / RFA30-2" / RFA30-12"
Application	Marine use for cargo piping systems in ships for carriage of liquefied gases in bulk Marine use for fuel piping systems in ships using Gases as Fuel
Specified Standard	Lloyd's Register Rules and Regulations for Classification of Ships (July 2019), Part 5, Chapter 12 Chapter 5 of Lloyd's Register's Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk (July 2019) Part B-1, Section 16 of Lloyd's Register's Rules and Regulations for Classification of Ships

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Yong-Dae Kong

Senior Specialist to Lloyd's Register Asia
A member of the Lloyd's Register group

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using Gases or other Low-flashpoint Fuels (July 2019)

Ratings Refer to Appendix

Additional Tests The following tests are carried out on representative samples in accordance with
BS 6364:1984 and KS B 2101:2003 with satisfactory results:-
1) Shell test
2) Cryogenic service test
3) Seat leakage test
4) Flow capacity test

Other Conditions
1) Where the valves are intended to be installed on a ship classed with LR, the valves are to be made, installed and tested in accordance with the Class I & II piping systems requirements of Part 5, Chapter 12 of the Rules and Regulations for the Classification of ships.
2) Seat tightness testing for bi-directional flow is to be additionally performed where it is required by 5.13.1.1.1 of the IGC code.
3) The requirements for design temperatures below -165°C shall be specially agreed with the Flag Administration in accordance with Chapter 6, Table 6.4 of the IGC Code.

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

The Design Appraisal Document No. LR2042097TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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