Certificate No: LR2548209TA
Issue Date: 31/10/2024
Expiry Date: 30/10/2029

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	**Kwang Sung Co., Ltd**
Address	81, Saengnim-daero 928beon-gil, Saengnim-myeon, Gimhae-si, Gyeongnam, Korea, 50800, South Korea
Place of Production	Get SCR Co., Ltd. 854-3, Muan-ro, Bubuk-myeon, Miryang-si, Gyeongnam, 50404, South Korea
Place of Production	Kwang Sung Co., Ltd 55-26, Chodongnonggongdanji-gil, Chodong-myeong, Mirang-si, Gyeongsangnam-do, South Korea
Type	Gas analyser units
Description	Measuring sensor of NOx and O2 emissions in exhaust gas. Sensor type – electrochemical (zirconia electrolyte), Range- NOx (0 to 1500 ppm) and O2 (0 to 21%), Accuracy - ±1% of full scale, Ambient temperature - 5˚C to 105˚C, Power supply – 24Vdc, Junction box - 220(W) x 120(D)x 81(H), Material - Aluminum
Trade Name	GS-S-3000
Application	Marine, offshore and industrial applications for use in environmental categories ENV2 in the “General Power Distribution Zones” as defined in LR Type Approval System Test Specification No.1, July 2024

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Gyung-Hwan Lee

Electrical & Control - Lead Specialist to
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Specified Standard	Manufacturer's design specification (GS-S-SPS, Rev. 2, dated 09 September 2024)
Additional Tests	Ingress protection (IP55, IEC 60529) Dry heat (at 50˚C, 16 hours)
Other Conditions	Equipment to be mounted in enclosed spaces together with other equipment are to be tested with 70˚C. Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and regulations. If the specified standards are amend during the validity of this certificates, the product is to be re-approved prior to it being supplied to vessels to which the amended standard apply. (In case of applications other than Marine) The application of this Type-Approval Certificate will be limited to the relevant scope of the Specified Standards and acceptance thereof by the local authorities.

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.

Previous Version: 19-40014(E3)-02

The Design Appraisal Document LR2548209TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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