Certificate No: LR2003995TA
Issue Date: 04/06/2020
Expiry Date: 03/06/2025

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	**LIAOYANG SHUANGHUA INSTRUMENT Co.,Ltd.**
Address	No.122 Middle Rongxing Road, Taizi River District, Liaoyang, 111000, China
Place of Production	LIAOYANG SHUANGHUA INSTRUMENT Co.,Ltd. No.122 Middle Rongxing Road, Taizi River District, Liaoyang, 111000, China
Type	Level Gauges
Description	Glass magnetic floating ball level gauge. Flat glass plate level gauge. Glass tube level gauge. Self-operated dial level gauge.
Trade Name	UHZ-511-C, UHZ-512-C, UHZ-515-C & UHZ-516-C ULB-3A & ULB-3B ULG-A & ULG-B SH-SPCG-V & SH-SPCG-S
Application	Marine and offshore application for piping systems as below: UHZ-511-C, UHZ-512-C, UHZ-515-C & UHZ-516-C: - Fresh water, Sea water, Sewage water and Oils*. ULB-3A & ULB-3B: - Fresh water, Sea water, Sewage water and Oils*. ULG-A & ULG-B: - Fresh water, Sea water and Sewage water. SH-SPCG-V & SH-SPCG-S: - Fresh water, Sea water and Oils*. * The flash point (closed cup test) of oils is not less than 60 °C.

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De Ming Hu

Lead Specialist to Lloyd's Register
Classification Society (China) Co Ltd
A member of the Lloyd's Register Group

19th Floor, 550 Yan An dong Road, Shanghai,
Huangpu District, China

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Specified Standard

LR Rules and Regulations for the Classification of Ships, July 2019
SOLAS 1974/97 as amended Regulations II-2/4.
Manufacture's Specification - Q/LSH 007-2019.

Ratings

Type of Level gauges with Range, Design and Test Pressure:
UHZ-511-C & UHZ-512-C : Range (300-3000), Design Pressure 6 Bar, Test Pressure 9 Bar
UHZ-515-C & UHZ-516-C : Range (300-2000), Design Pressure 3 Bar, Test Pressure 5 Bar, Gas tightness test pressure 0.3 Bar
ULB-3A & ULB-3B : Range (300-1500), Design Pressure 2.5 Bar, Test Pressure 4 Bar
ULG-A & ULG-B : Range (300-1500), Design Pressure 2.5 Bar, Test Pressure 4 Bar
SH-SPCG-S : Range (2000-3000), Accuracy Difference/ Deviation 2.5%
SH-SPCG-V : Range (2000-4000), Accuracy Difference/ Deviation 2.5%

Design Temperature:
UHZ-511-C, UHZ-512-C, UHZ-515-C, UHZ-516-C, ULB-3A, ULB-3B, ULG-A, ULG-B,
SH-SPCG-V & SH-SPCG-S : <80 Deg. C

Level Gauge Body Material:
UHZ-511-C, UHZ-512-C, UHZ-515-C, UHZ-516-C, ULB-3A, ULB-3B, ULG-A, ULG-B,
SH-SPCG-V & SH-SPCG-S : SUS304.

Details refer to 'Appendix-1'

Other Conditions

Where gauge glasses are used for indicating the level of liquid in tanks containing lubricating oil, fuel oil or other flammable liquid, the glasses are to be of the flat type (ULB-3A & ULB-3B) of heat-resisting quality.

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In passenger ships, sounding devices for fuel oil tanks, lubricating oil tanks and other tanks which may contain flammable liquids are to be of a type (such as type UHZ-515-C & UHZ-516-C) which does not require penetration below the top of the tank.

In general, specifications in Part 5 Chapter 1 Section 3.7, Part 5 Chapter 13 Sections 12.11.4 to 12.11.7 & Part 5 Chapter 14 Sections 2.1.1 & 2.1.2 of Lloyd's Register's Rules and Regulations for the Classification of Ships and SOLAS 1974/97 as amended Regulations II-2/4.2.2.3, II-2/4.2.3 and II-2/4.2.

Level gauges shall be protected from mechanical damage and well lit.

Where level gauges are intended to be used in Class II piping systems, materials are to be manufactured and tested in accordance with the appropriate requirements of the Rules for Materials.

The level gauges shall not be installed in hazard area.

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 Classification Society (China) Co Ltd of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. LR2003995TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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