Certificate No: LR2012743TA
Issue Date: 13/07/2020
Expiry Date: 12/07/2025

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	**Shinilace Co., Ltd.**
Address	#80, 170 beon-gil, Dadae-ro, Saha-gu, Busan, Korea, Republic of
Type	Tube Fittings
Description	Double ferrule type and bite type tube fittings for stainless, carbon steel and brass pipes
Trade Name	I-LOK Type, Bite Type (JIS B 2351), DIN Type (DIN 2353) & DIN S-Type
Application	High pressure tube connections for use in marine, offshore and industrial piping systems with hydraulic system fluids, fuel oil, lubricating oil, fresh water, salt water and gas
Specified Standard	Lloyd's Register (LR) Rules and Regulations for the Classification of Ships (July2020), Part 5, Chapter 12 IACS UR P2.11 Type approval of mechanical joints (Rev.4 2016)
Ratings	I-LOK, Bite & DIN Type Maximum Pressure : 250 kg/cm^2 (245 bar) Max. tube outside diameter : 50.8 mm DIN S-Type

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Maximum Pressure	: 326 kg/cm^2 (320 bar)
Max. tube outside diameter	: 50.8 mm
Material	: SUS316/L

Other Conditions

Where the tube fittings are intended to be installed on a ship classed with LR, the following conditions of acceptance will be applicable:-

1. The tube fittings are to be installed and tested in accordance with Part 5, Chapter 13, Section 2 of the Rules and Regulations for the Classification of Ships in so far as applicable.
2. The tube fittings are to be made, installed and tested to appropriate pipe class requirements in accordance with Part 5, Chapter 12 of the Rules and Regulations for the Classification of Shipsin so far as applicable.
3. Brass tube fittings are not to be used in fuel oil line.
4. O-ring joints are not to be used for joining section of pipe.
4. The tube fittings are to be installed in accordance with the manufacturer's instructions.
5. Type approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.
6. If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.
7. 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.

The Design Appraisal Document No. LR2012743TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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