Certificate No: LR2543974TA
Issue Date: 09/03/2025
Expiry Date: 08/03/2030

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 **HANSUN ENGINEERING CO LTD**

Address 27, Noksansandan 361-ro, Gangseo-gu, Busan, 46754, South Korea

Type Compression Fittings

Description Double ferrule compression type of tube fittings for stainless, carbon steel and brass

Trade Name S-Lok Type Tube Fittings

Application High pressure tube connections for use in marine and offshore piping systems with hydraulic systems fluids, fuel oil, lubricating oil, fresh water, salt water, sanitary, gas, steam and condensate.

Specified Standard Lloyd's Register Rules and Regulations for Classification of Ships, Part 5, Chapter 12, Section 2, July 2024.
Lloyd's Register Type Approval, October 2024, Test Specification Number 2.

Ratings Inch Tubing :

Tube O.D (inch)	Normal pressure ratings (psi)		
	Stainless steel	Carbon Steel	Brass
1/8"	10,900	10,900	3,400
3/16"	10,200	10,200	3,400
1/4"	10,200	10,200	3,500
5/16"	8,000	8,000	2,700
3/8"	6,500	6,500	2,200

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Johannes Wiegel
Engineering Piping/Decarbon - Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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1/2"	6,700	6,700	2,200
5/8”	6,000	6,000	1,900
3/4”	5,800	5,800	1,800
7/8”	4,800	4,800	1,500
1”	4,700	4,700	1,500
1 ¼”	4,900	4,900	1,500
1 ½”	4,900	4,900	1,500

Pressure-temperature rating : see manufacturer’s catalogue

Additional Tests

The following tests have been carried out: -

1) Leakage test
2) Bursting test
3) Repeated assembly test
4) Pull-out test
5) Impulse and vibration test
6) Vacuum test
7) Rotary flexure test

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 fittings are to be installed in accordance with the manufacture’s instruction.

2) Attention is drawn to Section 1.3.6 of IMO MSC/Circ. 1321- Guidelines for Measures to prevent Fires in Engine-Rooms and Cargo Pump-Rooms and Cargo Pump-Rooms which describes that compression couplings require careful attention to tightening procedures and torques to avoid leaks or damage to the pipe when subjected to over-tightening and they should not be used in the fuel supply line of the (oil engine) injection pumps and spill system.

3) Couplings using seal-materials are only to be used in services and locations where no fire endurance test acc. to Part 5, Chapter 12, Table 12.2.8 is required.

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

Previous Version: LR2004171TA-02

The Design Appraisal Document LR2543974TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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