Certificate No: LR2422445TA
Issue Date: 25/07/2024
Expiry Date: 25/07/2029

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	**MANULI RYCO Hydraulics Sdn. Bhd.**
Address	Plot 207, Kuala Ketil Industrial Estate, Kuala Ketil, Kedah, 09300, Malaysia
Place of Production	MANULI RYCO Hydraulics Sdn. Bhd. Plot 207, Kuala Ketil Industrial Estate, Kuala Ketil, Kedah, 09300, Malaysia
Place of Production	MANULI RYCO HYDRAULIC (DALIAN) CO. LTD. 38 Ying Ri Road, Ying Cheng Zi Industrial Zone, Gan Jing Zi District, Dalian, Liaoning, 116036, China
Place of Production	Manuli Hydraulics (Suzhou) Co.,Ltd No. 85, Xinglin Road, Suzhou Industrial Park, Suzhou, Jiangsu, 215021, China
Type	Flexible Pipe Couplings And Hoses
Description	Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings Designations: Diehard T1D Slider T1S Survivor RQP1 DF1D Diehard DF1S Slider DK1D Diehard DK1S Slider

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Teck Wee Chng

Engineering Piping - Senior Specialist to
Lloyd's Register Singapore Pte Ltd
A member of the Lloyd's Register group

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Tower 1, 138588, Singapore

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Type Approval Certificate

Fire Suppression T1F

Trade Name	SAE100R1
Application	For use on ships and offshore installations classed with Lloyd's Register, as short lengths in systems of fresh and seawater, compressed air, water based hydraulics, hydraulic oil, fuel and lubricating oil.
Specified Standard	Part 5, Chapter 12 of Lloyd's Register's Rules and Regulations for the Classification of Ships (July,2013) Part 5, Chapter 10 of Lloyd's Register's Rules and Regulations for the Classification of Mobile Offshore Units (September 1996 plus Notices Nos. 1, 2, 3, 4, 5 & 6 as applicable) Fire Resistant Testing according to ISO 15540/15541
Ratings	Type: SAE100R1 Sizes: DN 5 to DN 51 Maximum Working Pressure: 40 to 250 bar (refer to appendix) Service Temperature: –40°C to +150°C (refer to appendix) Coupling Material: Carbon Steel AISI Stainless Steel (Option) and Electroplated Fe/Zn12c acc. to AS1789
Other Conditions	Where synthetic rubber hoses are used for oil fuel supply to burners, the hoses are to have external wire braid protection in addition to the integral wire braid. Carbon steel couplings are to be normalized for temperatures below -10°C. In all cases the hoses are to be installed in accordance with the manufacturer's

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instructions and tested to the satisfaction of the attending

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 Singapore Pte Ltd of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document SEATASS230 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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