



## 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.

|                            |  |
|----------------------------|--|
| <b>Manufacturer</b>        | <b>MANULI RYCO Hydraulics Sdn. Bhd.</b>  |
| <b>Address</b>             | Plot 207, Kuala Ketil Industrial Estate, Kuala Ketil, Kedah, 09300, Malaysia   |
| <b>Place of Production</b> | MANULI RYCO Hydraulics Sdn. Bhd.<br>Plot 207, Kuala Ketil Industrial Estate, Kuala Ketil, Kedah, 09300, Malaysia                                   |
| <b>Place of Production</b> | Manuli Ryco Hydraulics (Dalian) Co., Ltd.<br>38 Ying Ri Road, Ying Cheng Zi Industrial Zone, Gan Jing Zi District, Dalian, Liaoning, 116036, China |
| <b>Place of Production</b> | Manuli Hydraulics (Suzhou) Co., Ltd.<br>No. 85, Xinglin Street, Suzhou Industrial Park, Suzhou, Jiangsu, 215021, China                             |
| <b>Type</b>                | Flexible Hoses   |
| <b>Description</b>         | Flexible Hoses of Non-Metallic Material with Permanently Fitted Couplings<br>Designations: TEFLON RTH1   |
| <b>Trade Name</b>          | TEFLON Hose  |
| <b>Application</b>         | For use on ships and offshore installations classed with Lloyd's Register, as short lengths in systems of hydraulic oil                            |
| <b>Specified Standard</b>  | Part 5, Chapter 12 of Lloyd's Register's Rules and Regulations for the   |

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Tower 1, 138588, Singapore

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**Teck Wee Chng**  
Engineering Piping - Senior Specialist to  
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A member of the Lloyd's Register group

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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

Sizes: DN 6 to DN 25  
Maximum Working Pressure: 55 to 170 bar (Refer to appendix)  
Service Temperature: -60°C to +260°C  
Coupling Material: Carbon Steel AISI  
Stainless Steel (Option)  
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.

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 SEATASS234 and its supplementary Type Approval Terms and Conditions form part  
of this Certificate.

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and conditions set out in that contract.



## Appendix

### RATINGS

| TEFLON RTH1                        | DN (mm) | Max. Pressure (bar) |
|------------------------------------|---------|---------------------|
| RTH14                              | 6       | 170                 |
| RTH16                              | 10      | 165                 |
| RTH18                              | 12      | 120                 |
| RTH110                             | 16      | 105                 |
| RTH112                             | 19      | 85                  |
| RTH116                             | 25      | 55                  |
| Temperature Range: -60°C to +260°C |         |                     |

(NOTE) Maximum working pressure is dependent on working temperature. Details are to be in accordance with the producer's instruction.

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