Certificate No: LR25283810TA
Issue Date: 14/10/2025
Expiry Date: 13/10/2030

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	**Tofle Co., Inc.**
Address	886-1, Aza Shiragami, Kawakami, Hagi-shi, Yamaguchi, 758-0141, Japan
Place of Production	Tofle Co., Inc. 886-1, Aza Shiragami, Kawakami, Hagi-shi, Yamaguchi, 758-0141, Japan
Type	Flexible Hoses
Description	Metallic flexible hoses assemblies
Trade Name	TF and TFR series: TFR-2000, TF-10000, TF-3000, TFR-4000, TF-23000 & TF-23000(Monel)
Application	Marine use for piping systems in ships shown as follows: [TFR-2000, TF-10000, TF-3000, TFR-4000 & TF-23000]: Compressed air, fresh water, fuel oil, lubricating oil, steam (restricted to temporary flexible connections only), and engine exhaust systems [TF-23000(Monel)]: Sea water systems
Specified Standard	Lloyd's Register's Rules and Regulations for the Classification of Ships, Part 5, Chapter 12, Section 7, July 2025

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Satoshi Ueno

Engineering Decarbon/Machinary Specialist
to Lloyd's Register Group Limited
A member of the Lloyd's Register group

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Ratings

TFR-2000
Nominal size : 3/8”(10A) to 2”(50A)
Design pressure : 2.06 MPa ~ 4.32 MPa
Design temperature : 300 °C

TF-10000
Nominal size : 2 ½”(65A) to 12”(300A)
Design pressure : 0.62 MPa ~ 2.94 MPa
Design temperature : 300 °C

TF-3000
Nominal size : 3/8”(10A) to 2”(50A)
Design pressure
• Single braid : 1.1 MPa ~ 7.2 MPa
• Double braid : 2.1 MPa ~ 7.5 MPa
Design temperature : 40 °C ~ 300 °C

TF-4000
Nominal size : 3/8”(10A) to 2”(50A)
Design pressure : 4.12 MPa ~ 16.2 MPa
Design temperature : 300 °C

TF-23000
Nominal size : 3/4”(20A) to 12”(300A)
Design pressure : 0.84 MPa ~ 4.18 MPa
Design temperature : 300 °C

TF-23000(Monel)
Nominal size : 3/4”(20A) to 10”(250A)
Design pressure : 1.08 MPa ~ 4.18 MPa
Design temperature : 300 °C

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Other Conditions

Where the flexible hoses are intended to be installed in a ship classed with Lloyd's Register, the following comments are applicable:-

1) The use of flexible hoses should be restricted to short joining length only between various items of machinery and the permanent piping systems where some degree of flexibility is essential.

2) The flexible hoses should be fitted in readily visible positions.

This is to certify that Certificate No. LR2064095TA is extended and renumbered as shown.

All other details remain as the previous Certificate No. LR2064095TA to which this extension should be attached.

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

Previous Version: LR2064095TA

The Design Appraisal Document LR25283810TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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