



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE

Certificate No. TA23654M



This is to certify that the undernoted products have been approved in accordance with the requirements 12.3.4, Chapt.12, Part D of “Rules for the Survey and Construction of Steel Ships” and Chapt.2, Part 6 “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use”.

This certificate is issued to

Manufacturer :	TOFLE CO., INC., JAPAN
Place of Manufacturer :	1-6-16, Honmachi, Chuo-ku, Osaka-shi, Osaka
Product description :	FLEXIBLE TUBE
Type designation(s) :	TF-10000
Approval No. :	14FV206B
Valid until :	12 February 2029

The details are described in the attached sheets.

Issued at Tokyo on 21 December 2023.



S. Oishi
General Manager
Machinery Department

• **Particulars and conditions :**

Nominal diameter (A) : 65A, 80A, 100A, 125A, 150A
Design pressure (MPa) : 65A:1.57MPa, 80A:1.13MPa, 100A:1.34MPa,
125A:1.38MPa, 150A:1.05MPa
Kind of fluid : Fuel oil, Lubricating oil, Hydraulic oil, Thermal oil,
Steam, Fresh water, Sea water, Compressed air, Exhaust gas

• **Material :**

Tube : SUS 304, SUS316L
Braid : SUS304
Ring : SUS304

• **Type approval tests carried out :**

Pressure test, Burst test, Fatigue test, Bend test, Leakage test

• **Documents :**

Drawing No. : MWH805727-B, MWH807614-A, MWH807615-A

• **Installation requirements :**

Installation of flexible hose assemblies are to comply with requirements 12.3.4, Chap.12, Part D of the Rules.

• **Production test :**

The hoses used for piping belonging to Group I & II defined by the requirements 12.1.3, Chap.12, Part D of the Rules are to be subjected to hydraulic test in the presence of the Society's surveyor in accordance with the requirements 12.6.1, Chapt.12, Part D of the Rules.

• **Approved manufacturers and address :**

TOFLE OMEGA FLEX CO., INC.

886-1, Aza-Shiragami, Kawakami, Hagi-city, Yamaguchi-pref., JAPAN

MITSUWA • WELDTECH CO., INC.

1-179, Chishiro-cho, Moriyama-city, Shiga-pref., Japan

• **Notice**

Any significant changes in design or construction of the above items may render this certificate invalid.

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