

Type Approval Certificate



[Flexible Metal Hose]

Initial Approval 29 August 2000

Applicant TOFLE Co., Inc.
1-6-16, Honmachi, Chuo-ku, Osaka City, 541-0053, Japan

Product Description Type : TF-3000, TF-NW, TF-NW (MONEL), TF-UFO, TF-TYPE

* Place of manufacturing ;
TOFLE OMEGA FLEX CO., INC.
886-1, Aza-Shiragami, Kawakami, Hagi-city, Yamaguchi, 758-0141, Japan

" See Appendix 1 "

Approval Condition " See Appendix 1 "

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 5, Ch. 6, Sec. 1 of the Rules for Classification, Steel Ships.

This Certificate is valid until 28 August 2030

Issued at Tokyo, Japan on 31 July 2025



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME25033879182) and certificate No.(TKY00267-HS001).



KOREAN REGISTER

Park Mun-su

*General Manager of
Tokyo Branch Office*

Note : 1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

Product Description and/or Approval Condition

Date of Issue : 31 July 2025

1. Product Description ;

Type	Kind of Fluid	Nominal Dia. (A)	Design Press. (MPa)	Drawing No.
TF-3000 (Flange Type)	Fuel oil	10	6.37	FFD-1400-A
	Lub. oil	15	4.41	FFD-1410-A
	Fresh water	20	3.92	LPD-0150-A
	Sea water	25	3.92	JJD-0070-A
	Compressed air	32	2.94	
		40	2.45	
		50	1.96	
	Thermal oil	32, 40, 50	0.98	MWH809703-A
TF-3000 (Thread Type)	Fuel oil	10, 15	2.74	GSL-70080-A
TF-NW (Flange Type)	Fuel oil	20	4.18	AAB-1410-A
	Lub. oil	25	3.76	AAB-1420-A
	Fresh water	32	2.70	
	Sea water	40	2.04	
	Compressed air	50	1.46	
		65	2.00	
		80	1.30	
		100	1.08	
		125	1.38	
		150	1.10	
		200	1.12	
		250	1.12	
		300	0.84	
TF-NW (MONEL) (Flange Type)	Sea water	50	1.46	EFR-70561-A
		65	2.00	
		80	1.30	
		100	1.08	
TF-UFO (Flange Type)	Fuel oil	8 ~ 50	3.92	FFD-0170-A
	Lub. oil			SL-86X28-32
	Fresh water			
	Compressed air			
TF-TYPE (Flange Type)	Fuel oil	65	2.94	NFR-70006-A
	Lub. oil			
	Fresh water			
	Compressed air			
	Air	65	0.98	DFR-70203-A

2. Approval Conditions ;

- 1) Individual Product Certification is required in case of the hoses belonging to Class I or II piping system.
- 2) The hoses are to be used as short as possible in the length of the permanent piping system where flexibility is required.
- 3) Flexible Hoses should be marked with the following items.
 - Hose manufacturer's name of trademark
 - Date of manufacture (Month/Year)
 - Designation Type
 - Nominal diameter, Pressure rating, Temperature rating

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