

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	Straub Werke AG
Address	Straubstrasse 13, Wangs, 7323, Switzerland
Type	Mechanical Pipe Joints
Description	Axially non restraint pipe couplings for plain- ended pipes of all materials. T-profile insert to prevent creepage on the pipe, electrical conductivity clips
Trade Name	STRAUB-FLEX 1 and STRAUB-FLEX 2
Application	<p>For marine, offshore and industrial piping systems, the couplings are to be selected and installed in accordance with the manufacturer's recommendations.</p> <p>For marine piping systems, the coupling are acceptable in locations specified in the Rules for the Classification of Ships, Part 5, Chapter 12, Section 2.12, or the Rules for the Classification of Special service Craft Part 15, Chapter 1, Section 5.8 for non fire tested, slip type, slip on joints. Specific restrictions for these couplings are stated below.</p> <p>For other systems not mentioned in the Rules, not listed below or for Offshore or Industrial systems then these will be considered.</p>

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Restrictions.

The couplings are not acceptable in the following locations :-

1. Class 1 piping, CO₂, starting and control air systems.
2. Inside machinery spaces of category A or accommodation spaces for :-
 - a. Main lines of inert gas systems.
 - b. Pipe systems for flammable liquids including corresponding vent and sounding pipes.
 - c. Bilge lines
 - d. Cooling water and ballast systems
3. Steam pipe systems, except for pipes on weather decks of oil and chemical tankers.
4. Scuppers and discharge (overboard). Deck drains, except for pipes above the freeboard deck.
5. Pipelines in cargo holds, tanks and other spaces which are not easily accessible.
6. In pump rooms and open decks for inert gas main and distribution lines.
7. Fire mains, water spray and sprinkler systems.

Specified Standard

Lloyd's Register Rules and Regulations for the Classification of Ships July 2021, Special Service Craft July 2021, IACS UR P2, 2.7.4 rev. 10 Jan 2021

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Ratings See Appendix

Other Conditions For material combinations for the corresponding media the producer's recommendations and instructions to be sought.
Marking of the products to show:
Producer's name or trade mark, type designation, material combination, size, gasket material, torque and max. working pressure or pressure Class.

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

Previous Version: 02/20014 (E6)

The Design Appraisal Document HMD 8895-02, Issue No. 6 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Appendix

RATINGS

Model	Nominal Pressure (bar)				
	FLEX 1	FLEX 2			
Casing Material	1.4404 or similar 1.0 mm thickness of casing material	1.4404 or similar 1.0 mm thickness of casing material	1.4404 or similar 1.5 mm thickness of casing material	1.4404 or similar 2.5 mm thickness of casing material	1.0976 galvanized 3.0 mm thickness of casing material
Pipe OD (mm)					
48.3 - 168.3	16.0	-	-	-	-
180.0	-	12.0	16.0	16.0	-
200.0	-	11.0	15.0	16.0	-
219.1	-	10.0	13.5	16.0	-
250.0	-	9.0	12.0	16.0	-
267.0	-	8.0	11.0	16.0	-
273.0	-	8.0	11.0	16.0	16.0
304.0	-	7.0	10.0	16.0	16.0
323.9	-	7.0	9.5	16.0	16.0
355.6	-	6.0	8.5	16.0	16.0
406.4	-	5.5	7.5	15.0	16.0
457.2	-	5.0	5.0	5.0	-
508.0	-	4.5	5.0	5.0	-

Former Version Name	1L	2L	2LS	2LU	2H
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