



Lloyd's
Register

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.

This certificate is issued to:

PRODUCER	Walter Stauffenberg Im Ehrenfeld 4 58791 Werdohl Germany
DESCRIPTION	Carbon steel (C15, C22, St35, S235JR2 and 11SMnPb30K+C) high pressure 24° compression couplings with or without seals sensitive to heat as per Stauff Catalogue 01/2015,
TYPES	STAUFF LL (very light gauge), L (light gauge) and S (heavy gauge)
APPLICATION	For pressure pipes in the marine, offshore and industrial environment. <u>Restrictions</u> - Bulkhead couplings are not to be used on watertight bulkheads, gastight bulkheads and for "A", "B" fire class divisions. - Couplings with seals sensitive to heat are not acceptable in the following locations : <ol style="list-style-type: none">1. Starting/control air and CO₂ systems.2. Inside machinery spaces of category A or accommodation spaces for :-<ol style="list-style-type: none">a. Main lines of inert gas systems.b. Pipe systems for flammable liquids including corresponding vent and sounding pipes.3. Fire main, water spray and sprinkler systems or similar which are not always filled with water.

Certificate No.	15/20081
Issue Date	19 August 2015
Expiry Date	18 August 2020
Sheet	1 of 2

Lloyd's Register EMEA
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RATINGS	Carbon steel couplings	Pipe Outside Diameter [mm]	Maximum Nominal Pressure PN at 20 °C [bar]
	LL (very light gauge)	4 – 8	100
	L (light gauge)	6 – 10 12 – 18 22 – 42	500 400 250
	S (heavy gauge)	6 – 10 12 – 16 20 – 38	800 630 420
	Temperature Range	Carbon steel : FPM (Viton): NBR (Buna): PTFE (Teflon):	-40°C to +120°C -25°C to +200°C -35°C to +100°C -60°C to +200°C

Pressure reduction at elevated temperatures for carbon steel as per manufacturer's recommendations:

Temperature [°C]	50	100	150	200	250	300	400	450
Reduction factor	1,0	1,0	0,89	0,81	0,72	0,65	0,59	0,54

STANDARDS

Lloyd's Register's Rules and Regulations for the Classification of Ships, 2015 and IACS P2 including wet fire endurance test for couplings sensitive to heat.

"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."

The Design Appraisal Document No. HTS/ENS 33174-15, Issue No. 0 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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