Certificate No: LR26268790TA
Issue Date: 02/06/2026
Expiry Date: 01/06/2031

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	**Lokring Technology Corporation**
Address	38376 Apollo Parkway, Willoughby, OH, 44094, United States
Type	Pipe Couplings
Description	Elastic Strain Preload (ESP) Mechanically attached pipe fittings and Lokring tooling PRODUCT TYPE Low Temperature Carbon Steel- 333 Process Fittings (LTCS)& Carbon steel Fittings (MAS)
Trade Name	Lokring LTCS and MAS Fittings
Application	Process Pipe Fittings for Sour Service - Offshore and Industrial Applications
Specified Standard	LR Rules and Regulations for the Classification of Offshore Units 2025 ASME B 31.1- 2024 ASMEB 31.3- 2024 NACEMR0175/ ISO15156-1 First Edition & NACE TM0177-2005
Ratings	As defined and documented in manufacturer's documentation and calculations. Consult manufacturer for pressure- temperature ratings
Additional Tests	Test report 24-2007-161706 for H_2S exposure

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Gopal Nair

Piping & Pressure System Principal Specialist
to Lloyd's Register North America, Inc.
A member of the Lloyd's Register group

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Other Conditions

1. For Low Temperature Carbon Steel 333 fittings any temperature is allowed with a more restrictive partial pressure of H_2S of 15 psia, derived from the test conditions of the test report24-2007-161706. End user to consult with Lokring Technology for partial pressure of H_2S and the tested envelope not to be exceeded.

2. Report 24-2007-161706 is based on a modified test to evaluate the configuration of the fittings, considers only sulphide stress cracking and effect of any corrosion is not addressed in this report. Accordingly end user to consult manufacturer for effect of erosion or corrosion.

3. Where flanged fittings are employed, the materials currently proposed are not listed in ASME B16.5. Accordingly, for the flanges material procurements and manufacturing to meet an acceptable standard such as MSS SP-44. The pressure temperature limitations will be as per the acceptable flange standard.

4. Couplings do not employ elastomeric sealing materials.

5. Couplings covered under this certificate are primarily intended for process side and not to be employed where requirements of IACS URP.2.11 requirements as specified for marine applications.

6. Any tubes and/or pipes connected are to have a minimum burst pressure ratio of 4:1 and suitability of the pipe scantlings is to be advised by the firm. The pipe segments connected are to maintain the minimum recommended cross-sectional area, taking also into account the assumed corrosion allowance on case-by-case basis. Test report 24-2007-161706 is based on seamless pipes and this need to be accounted for during selection of the pipes.

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7. Low temperature applications the driver are to be impact tested as per applicable Rules / Codes.

8. MAS products are intended for non-sour service.

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 North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR21228904TA

The Design Appraisal Document TSO/26-061031/LR26268790TA/PRJ111005135595/GN and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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