



Confirmation of Product Type Approval

Company Name: LOKRING TECHNOLOGY, LLC

Address: 38376 APOLLO PARKWAY WILLOUGHBY OH 44094 United States

Product: Elastic Strain Preload (ESP) Fittings

Model(s): MAS-3000, MAS-3000-RCPL

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2200436-PDA	13-JAN-2022	12-JAN-2027
Manufacturing Assessment (MA)	22-5404070	29-AUG-2022	28-AUG-2027
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Marine & Offshore Application - For joining Pipe and Tube . May be used in flammable fluids since none of the fittings components will deteriorate in a fire.

Description

1) MAS-3000 for Carbon Steel Pipe, ASTM A53 and A106, SCH 40 and 80, ¼" through 3" NPS.

Body and swage rings of this fitting are made from micro alloyed Carbon steel

2) MAS-3000-RCPL for Carbon Steel Pipe, ASTM A53 and A106, SCH 40 and 80 , 1/4" NPS through 3" NPS.

Body made from stainless steel and swage rings made from carbon steel

3) MAS-3000 for Carbon Steel Pipe, ASTM A53 and A106, Sch 160, 1/2" through 1" NPS.

Ratings

For Fittings, Sizes, Pressure Rating, etc. see attached "pdf" for details.

Service Restrictions

Unit Certification is not required for this product.

If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

Comments

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Drawing no. 16-005, Proposed Test Plan Procedure for extension of American Bureau of Shipping PDA, 2016

Drawing no. 6090128R6, Guideline for Designing ASME B31 Pressure Piping Using Lokring™ Fittings with Elastic Strain Preload® (ESP®) Technology, 2015

Drawing no. 6090127 Lokring Fitting Applications Guide, 2014

Drawing no. 08-017 TSSA Subm 020311, Test Report 08-017 TSSA of MAS-3000 P64 Fitting, 2011, Lokring Technology

Drawing no. 11-014 052511, Test Report 11-014 of MAS-CPL-P64, 2011, Lokring Technology

Drawing no. 11-022 Lokring API 6FB Fire test 020212, Test Report 11-022 of LTCS-333 and MAS-3000 product lines, 2011, Lokring Technology

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 12/Jan/2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

The Rules for Conditions of Classification, 2022 Marine Vessel Rules 1-1-4/7.7, 1-1-A3,1-1-A4, which covers the following:

2022 Rules for Building and Classing Marine Vessel Rules: 4-6-4/13.7.1(b), 4-6-4/Table 2, 4-6-2/5.9.

The Rules for Conditions of Classification, Offshore Units and Structures, 2022 Mobile Offshore Units 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2022 Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.13.

International Standards

IACS P2.11.5 - IACS Req. 2001/Rev.5 2021

EU-MED Standards

NA

National Standards

ASTM F 1387:2019

Government Standards

NA

Other Standards

NA



A handwritten signature in blue ink, appearing to read "Joseph W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 08-Apr-2026 8:14

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.