



Confirmation of Product Type Approval

Company Name: HY-LOK CORPORATION

Address: 97, NOKSANSANDAN 27-ROGANGSEO-GU 46751 Korea, Republic of

Product: Fitting, Hydraulic Pipe Fittings

Model(s): SWLA, SWTA, SWLB, SWXA, SWFC, SWHC, SWOL, SWBA, SWBR, SWCA, SLA, SLB, SXA, SLC, STA, SFC, SHC, SCA, SBA, SBR, H-SPB, H-SPR, H-SPD, H-SHB, SNOL, SPOL, SOL

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2195750-PDA	14-DEC-2021	13-DEC-2026
Manufacturing Assessment (MA)	19-BK3756133	07-NOV-2019	07-JAN-2025
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

Hydraulic Fluid Systems

Description

Socket Weld and threaded steel pipe fittings (See the attached list)

Ratings

Fittings shall be designated as class 2000, 3000 and 6000 for threaded end fitting and class 3000, 6000 and 9000 for socket-weld end fittings.

Pressure and Temperature ratings (See the attached list)

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

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

2. Socket welded joints using standard fittings may be used for Classes I and II piping up to and including 80 mm (3 in.) nominal diameter, except in toxic and corrosive fluid services (see 4-6-1/3.25 and 3.27 of Marine Vessels Rules) or services where fatigue, severe erosion or crevice corrosion is expected

to occur.

3. Threaded joints having tapered pipe threads complying with a recognized standard are not to be used for toxic and corrosive fluid services and for all services of temperatures exceeding 495 C(923F). They may be used for Classes I and II piping subject to limitations indicated in the table of 4-6-2/5.5.5 (a) of Marine Vessels Rules and the limitations for hydraulic oil system in 4-6-7/Table 1 of Marine Vessels Rules.

4. Taper-thread joints up to 80 mm (3 in.) nominal diameter may be used without pressure limitation for connection to equipment only, such as pumps, valves, cylinders, accumulators, gauges and hoses. When such fittings are used for solely, join sections of pipe, they are to be in accordance with 4-6-2/5.5.5 (a) of Marine Vessels Rules. However, hydraulic systems for the following services are to comply with the stated limitations in all respects (in 4-6-2/5.5.5 (a) and 5.5.5 (c) of Marine Vessels Rules):

- Steering Gear hydraulic system,
- Controllable Pitch Propeller hydraulic system,
- Hydraulic systems associated with propulsion or Propulsion Control

5. As per 2.2 (Pressure Test Capability) of ASME B16.11(2016), the fitting shall be capable of withstanding a hydrostatic test pressure required by the applicable piping code for seamless pipe of material equivalent to the fitting forging and of the schedule or wall thickness correlated with the fitting Class and end connection.

6. Trademark of the Manufacturer, pressure rating and size are to be legibly stamped or cast on the exterior of the fitting.

Notes, Drawings and Documentation

Manufacturer's Drawing (Doc. No. 310PF-SCH, Rev.2)

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 13/Dec/2026 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

2021 Marine Vessel Rules: 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/5.5.2, 4-6-2/5.5.5 & 4-6-7/3.5.1

International Standards

NA

EU-MED Standards

NA

National Standards

ASME B16.11 (2016)

Government Standards

NA

Other Standards

NA



A handwritten signature in dark ink, appearing to read "James W. Wilson".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 13-Dec-2021 7:03

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.