



Confirmation of Product Type Approval

Company Name: JOKWANG I.L.I. CO., LTD.

Address: 37, SANMAKGONGDANBUK 10-GIL Korea, Republic of

Product: Cryogenic Safety Valve

Model(s): JSV-FF100

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	22-2284142-PDA	27-JUL-2022	26-JUL-2027
Manufacturing Assessment (MA)	22-5409603	14-SEP-2022	13-SEP-2027
Product Quality Assurance (PQA)	NA	NA	NA

Tier

5 - Unit Certification Required

Intended Service

Safety relief valves intended for protection against overpressure for gases and liquids for cryogenic services

Description

Material contents are shown below:

1. Body/Bonnet: SA351-CF8M
2. Disc/Seat: 316SS-st.
3. Spring: Chrome Alloy (SWOSC-B, SAE9254), Inconel X-750, 316 SS

Ratings

1. Design pressure, setting pressure range [MPa]
 - a. 150# x 150#: 1.9, 0.1~1.9 (*)
 - b. 300# x 150#: 1.9/5.1, 0.1~1.9 & 1.91~4.96 (*)
 - c. 300# x 300#: 1.9/5.1, 0.1~1.9 & 1.91~4.96 (*)
2. Min/Max allowable Temperature[°C]: -196 / +180 (*)
3. Valve size: 3/4"x1", 1"x2", 1-1/2"x2", 1-1/2"x3", 2"x3", 3"x4", 4"x6"
4. Orifice size: D to P and D1 to P1 (*)

(*) See attached file for detailed description/ratings of the certified model.

Service Restrictions

1. Unit certification is required for the products intended to be used at a working temperature below -55 degree C and testing specified in section 5C-8-5/13.1.1 & 5C-13-16/7.1 of the ABS Marine Vessel Rules is to be carried out in the presence of the Surveyor as required.
2. If the manufacturer or purchaser requests 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. All valves are to be tested at the plant of manufacturer in the presence of the Surveyor in accordance with 5C-8-5/13.1.1(b) and 5C-8-6/2.2(ABS) or 5C-13-16/7.1 and 5C-13-16/1.1 of the Marine Vessel Rules.
3. Material testing of the products intended to be used at a working temperature below -55 degree C is to be witnessed by an ABS Surveyor in accordance with 5C-8-6/2.2 & 5C-13-16/1.1 of the Marine Vessel Rules.
4. All valves are to bear permanent identification, such as the manufacturer's name or trademark, standard of compliance, material identify, pressure rating, etc. as required by the standard of compliance and at which the manufacturer guarantees the valve to meet the requirements of the standards. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life in accordance with 4-6-2/5.11.4 and 4-6-1/7.1.4 of the Marine Vessel Rules.
5. Unless specially directed by Administration, this approval will not be construed as a substitute for flag Administration's approval.
6. This certificate is not valid for US flagged vessels.

Notes, Drawings and Documentation

1. Drawing No. JKS-1621001T(Rev.5), JKS-1621002T(Rev.2), JKS-1621003T(Rev.2)
2. Prototype Testing Report:
 - a) Hydrostatic Test Report: HYD-210303-01, Dated 03-MAR-2021
 - b) Burst Test Report: HYD-210303-02, Dated 03-MAR-2021
 - c) Cryogenic Function Test Report:
 - TA-210414-01&02, Dated 14-APR-2021,
 - TA-210415-01&02, Dated 15-APR-2021,
 - TA-210416-01&02, Dated 16-APR-2021,
 - TA-210420-01&02, Dated 20-APR-2021
 - d) Ambient Function Test Report:
 - TA-210423-01 thru 08, Dated 23-APR-2021
 - e) Capacity test: ASME NBBI Certification Nos. 89030 & 89041
3. Prototype Testing Report(300#): ABS Work order 5157269-A, Dated 20-June 2022

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 26/Jul/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 Vessels 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: 4-6-1/7.1.4, 4-6-2/5.11 & 5.15, 5C-8-5/12.2, 5C-8-5/13.1.1, 5C-8-6/2.2(ABS), 5C-13-7/Table 4, 5C-13-16/1,1 5C-13-16/7.1

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

2022 Rules for Building and Classing Mobile Offshore Units: 1-1-4/9.7

International Standards

IGC Code (2016 Edition), 5.13.1, 6.2.2, Table 6.4

IGF Code (2016 Edition), 16.7.1, 7.4.1.1, Table 7.4

EU-MED Standards

NA

National Standards

ASME BPVC SEC. VIII (2021 Edition)

Government Standards

NA

Other Standards

NA



A handwritten signature in black ink, appearing to read 'Joseph W. ...', is written over a light blue grid background.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 20-Sep-2022 7:39

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.