



Confirmation of Product Type Approval

Company Name: BMT CO., LTD.

Address: 17, SINSOJAESANDAN 2-RO, JANGAN-EUP, GIJANG-GUN, BUSAN Korea, Republic of

Product: Cryogenic Valve

Model(s): FCSC Series, FCGT Series

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	21-2081504-PDA	15-FEB-2021	14-FEB-2026
Manufacturing Assessment (MA)	23-6019713	11-SEP-2023	10-SEP-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier

5 - Unit Certification Required

Intended Service

Cryogenic gate and swing check valves for liquefied gas piping systems

Description

Cryogenic Swing Check Valve, Class 150, 2", 2-1/2", 3", 8", 14"

Cryogenic Gate Valve, Class 150, 6", 8"

Ratings

Design Pressure: 19 Bar at 38 degree C

Design Temperature: -196 degree C thru 100 degree C

Materials for Swing Check Valve

- Body/Bonnet: A351 Gr. CF8M
- Disc: A351 Gr. CF8M+STL No.6
- Seat Ring: A182-F316+STL No.6

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-13-16/7.1.1 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 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. 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 of the Marine Vessel Rules.
3. 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.
4. Unless specially directed by Administration, this approval will not be construed as a substitute for flag Administration's approval. This certificate is not valid for US flagged vessels.

Notes, Drawings and Documentation

1. Drawing nos.: 190731-01-124(Rev. B), 190731-01-124-02(Rev. B)
2. Prototype test report
 - 1) Pressure & Cryogenic test: BMT-CTR-201230-TA-01 thru 07, Dated 30 December 2020
 - 2) Burst test: HTRTA-210118-01, Dated 18 January 2021
 - 3) Flow capacity test: TCHPV-21-012 thru 018, Dated 13 January 2021

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 14/Feb/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

The Rules for Conditions of Classification, 2021 Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2021 Rules for Building and Classing Marine Vessels Rules: 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-13-16/7.1, 5C-13-16/Table 5 & 6

2021 Rules for Conditions of Classification – Offshore Units and Structures: 1-1-4/9.7, 1-1-A2 and A3, which covers the following:

2021 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, Table 7.4

EU-MED Standards

NA

National Standards

BS6364 (1984 Edition)

Government Standards

NA

Other Standards

NA



A handwritten signature in black ink, appearing to read 'James J. White'.

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 26-Jun-2024 4:24

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.