



Marine & Offshore

Certificate number: 13652/D1 BV

File number: ACH 102/071

Product code: 1030I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

JOKWANG I.L.I CO., LTD.

Yangsan (Gyeongnam) - KOREA (REPUBLIC OF)

for the type of product

SAFETY VALVES FOR BOILERS AND PRESSURE VESSELS

Full Bore Safety Valve Model JSV-FF21 (SSRF)

Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 08 Oct 2025

For Bureau Veritas Marine & Offshore,

At BV PUSAN, on 14 Sep 2023,

Won-jun JANG

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarp.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=7dydmt6fk>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Full Bore Safety Valve Model JSV-FF21 (SSRF)

1.1 - Design Specifications

Design	Full lift spring loaded safety valve with and without lever
Bonnet type	Close bonnet without lever Close bonnet with plain lever Close bonnet with packed lever Open bonnet with lever
DN (mm)	15x25, 20x25, 20x40, 25x40, 25x50, 32x65, 40x50, 40x65, 50x65, 50x80, 65x80, 65x100, 80x100, 80x125, 100x125, 100x150, 125x200, 150x200, 200x250
Max working pressure (MPa)	0.035 ~ 2.2
Design standard	JIS B8210, KS B 6216, JIS B2220, ASME VIII, ASME/ANSI B16.34, API 520, API 526
Setting pressure (MPa)	0.035 ~ 2.2
Coefficient of discharge (C)	41.2515
Temperature range (°C)	0 to 250
Connection in/out	Flanged, PN 10 and PN 20

1.2 - Materials

Part Name	Material
Body	JIS G5101 SC480 ASTM A216 WCB
Bonnet	JIS G5101 SC480 ASTM A216 WCB
Cap	A216 WCB
Spring	SWOSC, SAE9254, SUS316, SUS304
Gasket	PTFE, GRAPHITE, Non-asbestos

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogue N° K 2015 Vol. 27
- Full bore type safety relief valved drawing N° JKS-S1321003 rev. 2 dated 18/02/2018
- Full bore type safety relief valve drawing N° JKS-S1321002 rev. 2 dated 18/02/2018
- Full bore type safety relief valve (open bonnet) drawing N° JKS-S1321009 rev. 1 dated 18/02/2018
- Full bore type safety relief valve (open bonnet) drawing N° JKS-S1321004 rev. 2 dated 18/02/2018
- Manual instructions N° JK-OMP-E-01 rev.0 dated 19/12/2011
- Inspection test reports by the American National Board dated 08/01/2004
- Inspection and test plan N° JK-ITP-Q-BV rev.0 dated 11/02/2016
- Calculation sheet N° JK-BV-CAL-01 Rev. 02 dated 24/08/2023

No departure from the above documents shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.

3. TEST REPORTS

- Type tested for capacity measurement dated 05/06/2003 by the manufacturer and found satisfactory:
Size 25 x 50A (Average C-factor = 0,52)
Size 50 x 80A (Average C-factor = 0,57)
- Pressure test and performance test report of safety and relief valve N° SLO128433 dated 16/02/2016
- Mechanical test certificate N° 2015-0908-92 dated 08/09/2015

4. APPLICATION / LIMITATION

- 4.1 - May be used as a safety relief valve for steam, gases and liquids.
- 4.2 - May be not used for cargo tanks and piping system on Liquefied Gas Carriers.
- 4.3 - The maximum steam production is to be in accordance with the manufacturer's specifications. The C-factor for full lift safety valve will comply with Pt C, Ch1, Sec 3 [3.2.2] of Bureau Veritas Rules.
- 4.4 - The safety valves belong to Class I, Class II and Class III according to the relevant requirements stated in Part C, Ch 1, Sec 10.
- 4.5 - The safety valve body, disc and seat should be suitable for the intended service. In particular the nature of materials, joints included, is to be selected according to the fluid to be conveyed and the temperature.
- 4.6 - The approval does not include any operating gear for remote control of the valves.
- 4.7 - The valves are to be installed according to the manufacturer's instructions and Society's Rule requirements.

5. PRODUCTION SURVEY REQUIREMENTS

- 5.1 The products are to be supplied by **JOKWANG I.L.I CO., LTD.** in compliance with the type and the requirements described in this certificate.
- 5.2 This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.
- 5.3 BV product certificate is required.
- 5.4 - BV Certificate is required for materials of safety valve housings of class I (DN ≥ 50) or class II (DN ≥ 100). Materials of safety valve housings of class I (DN < 50) or class II (DN < 100) and for other parts are to be with Work's certificates.
- 5.5 - Each safety valve is to be hydraulically pressure tested to 1.5 times the design pressure.
- 5.6 - For information, **JOKWANG I.L.I CO., LTD.** has declared to Bureau Veritas the following production site:

JOKWANG I.L.I CO., LTD.
37, Sanmakgongdanbuk 10-gil,
Yongsan (Gyeongnam)
KOREA (REPUBLIC OF)

6. MARKING OF PRODUCT

The product shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Setting pressure
- Society's brand as relevant

7. OTHERS

It is **JOKWANG I.L.I CO., LTD.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

This certificate supersedes the Type Approval Certificate No. 13652/D0 BV issued by the Society.

*** END OF CERTIFICATE ***