



Marine &amp; Offshore

Certificate number: 13652/E0 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: 17 Jun 2030**

**For Bureau Veritas Marine & Offshore,**

At BV PUSAN, on 17 Jun 2025,

Seungbeom HONG

***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.

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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 - Ratings

Model	JSV-FF21 (SSRF)
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	Material
Body	JIS G5101 SC480, ASTM A216 WCB
Bonnet	JIS G5101 SC480, ASTM A216 WCB
Stem	Stainless Steel 304/410
Cap	Carbon Steel
Seat	Stainless Steel 304/316/316L
Disc	Stainless Steel 304/316/316L
Spring	Chrome Alloy, Stainless Steel 304/316
Gasket	PTFE, PctFE or V7020, 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**

- Drawing N° JKS-S1321002 Rev.3 dated 10/04/2025: *Full bore type safety relief valve.*
- Drawing N° JKS-S1321003 Rev.3 dated 10/04/2025: *Full bore type safety relief valve.*
- Drawing N° JKS-S1321004 Rev.3 dated 10/04/2025: *Full bore type safety relief valve - Open bonnet.*
- Drawing N° JKS-S1321009 Rev.2 dated 10/04/2025: *Full bore type safety relief valve - Open bonnet.*
- Manufacturer's catalogue N° K 2015 Vol. 27.
- 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**

3.1 - 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)

3.2 - Pressure test and performance test report of safety and relief valve N° SLO128433 dated 16/02/2016.

3.3 - Mechanical test certificate N° 2015-0908-92 dated 08/09/2015.

### **4. APPLICATION / LIMITATION**

4.1 - May be used as safety valve for:

- Steam - Water - Compressed air -

4.2 - The safety valve belongs to Class I, Class II and Class III according to the relevant requirements stated in *NR 467, Pt C, Ch 1, Sec 10*.

4.3 - 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.

4.4 - When the design temperatures exceeds 400°C, alloy steels are to be used. Other cast steel material used for safety valve body is subject of special consideration by the Society according to *NR 467, Pt C, Ch 1, Sec 3, [2.2.1]*.

4.5 - 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 *NR 467, Pt C, Ch 1, Sec 3, [3.2.2]*.

4.6 - The safety valves are to be set, sealed and installed according to 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 *NR 320*.

5.3 - Bureau Veritas product certificate is required.

5.4 - Bureau Veritas certificate is required for materials of safety valve housings of class I (DN≥50) or class II (DN≥100). Materials of safety valve housing 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,**  
**Yangsan (Gyeongnam)**  
**KOREA (REPUBLIC OF)**

### **6. MARKING OF PRODUCT**

Each valve shall be permanently marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working pressure and test pressure
- Bureau Veritas's mark

### **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 a previous Type Approval Certificate N° 13652/D1 BV issued by the Society.*

\*\*\* END OF CERTIFICATE \*\*\*