



Marine &amp; Offshore

Certificate number: 61377/A0 BV

File number: .

Product code: 7336I

*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*

**SAMSON REGULATION**  
VAULX EN VELIN CEDEX - FRANCE

*for the type of product*

**REGULATING VALVES FOR LIQUEFIED GAS PIPING SYSTEMS (NON-CLOSING)**  
Butterfly valves type 3331

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships  
IGC Code as amended by IMO Res. MSC.370(93)

*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: 03 Dec 2025**

**For Bureau Veritas Marine & Offshore,**

At BV LYON, on 03 Dec 2020,

Yann Krempelwicz



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](http://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**

#### **REGULATING VALVES FOR LIQUEFIED GAS PIPING SYSTEMS / Butterfly valves type 3331**

##### 1.1 Ratings

Model	Type 3331
Size range	DN100 to DN400 / NPS4 to NPS16
Design Standard	ASME B16.5
Class range	CL150
Design Pressure (bar)	19
Design Temperature (°C)	-196 / 220
End connections	Wafer

##### 1.2 Materials

Part	Material
Body	1.4401/1.4404 - S31600/S31603 (316/316L) or 1.4408 - A351CF8M
Insulating section	1.4408 - A351CF8M
Shaft	1.4401/1.4404 - S31600/S31603 (316/316L)
Butterfly Disc	1.4581 - (~ "A351CF8MC")

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

### **2. DOCUMENTS AND DRAWINGS**

- Drawing N° 1019-0303 Rev.1 dated 23/04/2019
- Drawing N° 1059-0038 Rev.2 dated 30/11/2020
- Drawing N° 1129-0667 Rev.1 dated 23/04/2019
- Appendix to Data Sheet T 8227 EN Edition December 2018
- Data Sheet T 8227 EN Edition September 2018
- Mounting and Operating Instructions EB 8227 EN Edition July 2004

*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 tests witnessed by a BV Surveyor including pressure test at ambient temperature and valve operation and leakage test at the minimum design temperature:

- Test report N° 2003670 including pressure test for the size NPS 16 - Class 150 dated 16/09/2020
- Test report N° 2003673 including pressure test for the size NPS 8 - Class 150 dated 16/09/2020
- Test report N° DDE 20E066-CR169 including cryogenic test for the size NPS 16 - Class 150 dated 29/09/2020
- Test report N° DDE 20E090-CR230 including cryogenic test for the size NPS 8 - Class 150 dated 12/11/2020

3.2 Fire resistance test not performed.

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

4.1 May be used for regulation of liquefied gas.

4.2 The valves are not to be used as shut-off valves.

4.3 The valves intended to be used for handling of Propylene Oxide or Ethylene Oxide/ Propylene Oxide mixtures shall be of a fire safe design.

4.4 The valve belongs to class I pressure piping according to the relevant requirements stated in Part D, Ch 9, Sec 5 of BUREAU VERITAS Rules for Steel Ships.

4.5 The valve intended to be installed on BUREAU VERITAS classed ship have to comply with Pt D, Ch 9, Sec 5 & IGC Code and type tests reports witnessed by BUREAU VERITAS are to be available for each type and size of valve.

4.6 When required in Part D, Ch 9, Sec 6 of the Bureau Veritas Rules applicable to liquefied gas carriers, Charpy V-notch impact test shall be carried out for castings. Castings in steel grades 316 and 316L at any temperature will be impact tested at -196 °C. A reduction may be granted for design temperature above -60 °C after examination by the Society.

4.7 The materials for valves housing, disc and sealing should be of a suitable type at the temperature and pressure for use with cargoes intended to be carried.

4.8 The approval does not include any operating gear for remote control of the valves.

4.9 The valve is to be installed according to manufacturer's instructions and Society's Rule requirements.

## **5. PRODUCTION SURVEY REQUIREMENTS**

5.1 The products are to be supplied by **SAMSON REGULATION** in compliance with the type and the requirements described in this certificate.

5.2 This type of product is within the category IBV of BV Rule Note NR320.

5.3 BV product certificate is required.

5.4 BV Certificates are required for materials of valve housings of Class I (DN $\geq$ 50). Materials of valve housings of Class I (DN $<$ 50) and other pressure boundary parts of Class I are to be with work's certificates.

5.5 Materials are to comply with the approved drawings and the applicable requirements in Part D of the BV Rules for Steel Ships. Charpy impact test is to be as per the Society's Rules on materials, and where relevant, in accordance with requirements of IGC Code.

5.6 Each valve is to be tested according BV Rules for Steel Ships Pt D, Ch 9, Sec 5 item 13.3.3.

5.7 For information, **SAMSON REGULATION** has declared to Bureau Veritas the following production site :

**SAMSON REGULATION**  
**1 RUE JEAN CORONA**  
**BP 140**  
**69512 VAULX EN VELIN CEDEX**  
**FRANCE**

## **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
- Society's brand as relevant

## **7. OTHERS**

It is **SAMSON REGULATION** 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.

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