



Marine &amp; Offshore

Certificate number: 33355/B0 BV

File number: ACM 145/2573/8

Product code: 73511

*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*

**HEROSE GMBH ARMATUREN UND METALLE**

Bad Oldesloe - GERMANY

*for the type of product*

**PRESSURE RELIEF VALVES FOR LIQUEFIED GAS PIPING SYSTEMS**

BELLOW SEALED SAFETY VALVES

**Requirements:**

BUREAU VERITAS Rules for the Classification of Steel Ships  
 BUREAU VERITAS Rules for the Classification of Offshore Units  
 BUREAU VERITAS Rules for Gas Fuelled Ships  
 IGC Code  
 IGF Code

*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: 28 Jan 2024**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 28 Jan 2019,

Adama Diene



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

#### **Bellow sealed Safety Valves**

##### **1.1 Design:**

Spring loaded, metal to metal seated, closed bonnet with or without lifting.

Inlet: female thread or male thread according to ISO 228/1, ISO 7/1 or ANSI B 1.20.1

Outlet: female thread according to ISO 228/1 or ANSI B 1.20.1

##### **1.2 Identification and Technical data:**

###### **Type 06800 – Bellow Sealed Safety Valve:**

Size range: DN15, DN20 and DN25

Pressure: PN40

Temperature range: -270 °C up to +225 °C

###### **Type 06801 – Bellow Sealed Safety Valve:**

Size range: DN15, DN20 and DN25

Pressure: PN40

Temperature range: --270 °C up to +225 °C

###### **Type 06805 – Bellow Sealed Safety Valve:**

Size range: DN15, DN20 and DN25

Pressure: PN40

Temperature range: -270 °C up to +225 °C

###### **Type 06806 – Bellow Sealed Safety Valve:**

Size range: DN15, DN20 and DN25

Pressure: PN40

Temperature range: -270 °C up to +225 °C

##### **1.3 Material and Components:**

Standard	DIN EN	ASTM
<b>Inlet body</b>	1.4571	A 276 Grade 316Ti
<b>Outlet body</b>	1.4308	A 251 CF 8
<b>Disc</b>	1.4541	A 276 Grade 321
<b>Bellow</b>	1.4571	A 276 Grade 316Ti
<b>Bellow stem</b>	1.4571	A 276 Grade 316Ti
<b>Stem</b>	CW453K	B 103 UNS C52100
<b>Bonnet</b>	1.4308 / 1.4305	A 251 CF 8 / A 314 Grade 303
<b>Spring</b>	1.4571	A 276 Grade 316Ti
<b>(Lifting) Cap</b>	1.4301	A 276 Grade 304
<b>Lever</b>	1.4408	A 351 CF8M

### 2. DOCUMENTS AND DRAWINGS

- HEROSE Catalogue, Edition 10/2018.

### 3. TEST REPORTS

- Cryogenic test including Pressure test and Leakage test according DIN EN 12567 / DIN EN 1626, witnessed by TÜV Nord.

- Function and Leakage Tests according to ISO 4126-1 performed on 25/06/2015 and 09/07/2015 and witnessed by an IACS Member.

- Tests performed on 28/11/2014, Test Report No. 1423 P 0131/ 14 / D / 0109 witnessed by TÜV Nord.

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

- 4.1 Bellow sealed Safety Valves intended to be used for air gases, vapours and cryogenic liquefied gases including LNG; in cargo handling systems of oil tankers and liquefied gas tankers and in piping systems onboard ships and offshore units.
- 4.2 The valves belong to class I according to BUREAU VERITAS Rules Part D, Ch 9, Sec 5 and Part C, Ch 1, Sec 10.
- 4.3 Valves intended to be used for handling of Propylene oxide or Ethylene oxide mixtures shall be of a fire safe type.
- 4.4 The used material should be suitable for the conveyed media.
- 4.5 The valves are to be installed according to the manufacturer's instructions and BUREAU VERITAS Rules requirements.

#### **5. PRODUCTION SURVEY REQUIREMENTS**

- 5.1 The valves are to be supplied by **HEROSE GmbH Armaturen und Metalle** 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 BUREAU VERITAS Product Certificate is required.
- 5.4 Arrangements shall be made for a Society's Surveyor to attend the tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme, BV Mode I, has been arranged, in order to issue the BUREAU VERITAS certificate for the units to be fitted on board ships classed with BUREAU VERITAS.
- 5.5 **HEROSE GmbH Armaturen und Metalle** has declared to BUREAU VERITAS that the products detailed in this certificate are manufactured at the production site stated on the front page of this certificate.
- 5.6 Material Requirements according BUREAU VERITAS Rules Part C, Ch 1, Sec 10 and IGC Code Ch 6.
- 5.7 Each valve is to be hydraulically pressure tested to 1.5 times the design pressure.

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

- Each valve is at least to be marked with:
- Manufacturer's name or logo
  - Type designation
  - Size
  - Design Pressure and Temperature range
  - Society's Brand as relevant

#### **7. OTHERS**

- 7.1 This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **HEROSE GmbH Armaturen und Metalle , Bad Oldesloe/GERMANY** will accept full responsibility for informing shipbuilders, ship owners or their sub-contractors of the proper methods of use and general maintenance of the units and of the conditions of this approval.
- 7.2 This Certificate supersedes the Type Approval Certificate N° 33355/A0 BV issued on 15/10/2013 by the Society.

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