



Marine & Offshore

Certificate number: 36134/B1 BV

File number: ACM 145/2574

Product code: 73311

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 AG

Frankfurt am Main - GERMANY

for the type of product

GLOBE VALVES FOR LIQUEFIED GAS PIPING SYSTEMS

Globe valves, types: 3241 and 3251

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships

IGC 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: 30 Nov 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 11 May 2020,

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:

Globe Valves, types: 3241 and 3251

1.1 Design:

With flanged or welded connections, the globe valves are operated by means of the pneumatic actuators, types: 3271 and 3277.

1.2 Identification and technical data for type 3241:

File Number	Nominal diameter		Design pressure			Temperature range
	DN	NPS	[bar]	[psi]	Class	
ACM 145/2574/1	25	1	40	580	300	-196 °C to +220 °C
ACM 145/2574/1	40	1 ½	20	290	150	-196 °C to +220 °C
ACM 145/2574/1	50	2	20/40	290/580	300	-196 °C to +220 °C
ACM 145/2574/1	65	2 ½	20	290	150	-196 °C to +220 °C
ACM 145/2574/1	80	3	20/40	290/580	300	-196 °C to +220 °C
ACM 145/2574/1	150	6	20	290	150	-196 °C to +220 °C
ACM 145/2574/1	200	8	40	580	300	-196 °C to +220 °C
ACM 145/2574/1	250	10	20	290	150	-196 °C to +220 °C
ACM 145/2574/1	300	12	20	290	150	-196 °C to +220 °C

1.3 Identification and technical data for type 3251:

File Number	Nominal Diameter		Design Pressure			Temperature range
	DN	NPS	[bar]	[psi]	Class	
ACM 145/2574/2	50	2	74	1073	900	-196 °C to +220 °C
ACM 145/2574/2	100	4	72	1044	900	-196 °C to +220 °C

1.4 Material and components:

Material and components according to manufacturer's technical data sheets.

2. DOCUMENTS AND DRAWINGS:

According to following documents:

Document	Designation	Revision
Technical data T 8000-xEN	Data Sheet T 8015 - EN.	March 2013
Technical data T 8000-xEN	Data Sheet T 8012 - EN.	April 2013
Technical data T 8000-xDE	Data Sheet T 8012 - DE.	August 2019
Technical data T 8000-xDE	Data Sheet T 8052 - DE.	October 2019

3. TEST REPORTS:

3.1 Cryogenic test at -196 °C.

Test Reports reference 1842670 and 1853446 dated 22/05/2013 witnessed by BUREAU VERITAS.

Test Reports reference 1000024595 dated 21/04/2020 witnessed by BUREAU VERITAS.

3.2 Pressure test and Leakage test according to DIN EN 60534-4 and ANSI FCI 70-2

Inspection Certificate dated 01/04/2014 witnessed by BUREAU VERITAS.

Inspection Certificate dated 02/04/2020 witnessed by BUREAU VERITAS.

4. APPLICATION / LIMITATION:

4.1 Low temperature and cryogenic globe valves intended to be used as control valves in cargo handling systems of oil tankers and liquefied gas tankers and in piping systems on board ships.

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

4.3 The valves belong to class I according to BUREAU VERITAS Rules.

- 4.4 Valves intended to be used for handling of propylene oxide or ethylene oxide mixtures shall be of a fire safe type.
- 4.5 The used material should be suitable for the conveyed media.
- 4.6 This approval does not include any operating gears or electrical equipment for remote control of the valves.
- 4.7 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 **SAMSON AG** 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 For information, **Samson AG** has declared to BUREAU VERITAS the following production site:
Samson AG, Frankfurt am Main / GERMANY
- 5.5 Material requirements according BUREAU VERITAS Rules Part C, Ch 1, Sec 10 and IGC Code.
- 5.6 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
- BUREAU VERITAS' marks

7. OTHERS:

- 7.1 It is **Samson AG'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.
- 7.2 This Certificate supersedes the Type Approval Certificate N° 36134/B0 BV issued on 30 Nov 2018 by the Society.

*** END OF CERTIFICATE ***