



NACE AND NORSOK COMPLIANT VALVES

SCS-00193
Rev. A
DCN # 00166600
DCN Date: Jan 08, 2019
Page 1 of 5

Printed copies are uncontrolled unless marked "CONTROLLED" in red.
Uncontrolled copies must be verified as current before use.

1.0 SCOPE

The purpose of this document is to define the special components that are installed in general industrial valves for use in NACE MR0175/ISO 15156 and NORSOK compliant applications.

2.0 DEFINITIONS

- 2.1 NACE MR0175/ ISO 15156-3:2015 “National Association of Corrosion Engineers” Standard Material Requirements – Metals for Sulfide Stress Cracking and Stress Corrosion Cracking Resistance in Sour Oilfield Environments
- 2.2 NORSOK M-630 Material Data Sheets for Piping”

3.0 PRODUCT CONFIGURATIONS

3.1 N Series and HN Series

- 3.1.1 The components that are wetted by the system media are the body, bonnet, stem and stem tip.
- 3.1.2 For 2507 NACE MR0175/ISO 15156-3:2015 (ref. 2.1) compliant valves, customers must use suffix 49151. It will have alloy 400 stem and stem tip instead of 2507.
- 3.1.3 Process sheet PS-41253 should no longer be required for NORSOK M-630 (ref. 2.2) 2507 valves as all 2507 raw material should be purchased from NORSOK approved suppliers. Verify material specifications and certifications as necessary..
- 3.1.4 The materials used to manufacture alloy 600 and titanium N Series valves are not defined as complaint materials in NACE MR0175/ISO 15156-3:2015 (ref. 2.1).

Valve Material Designator	Material	NACE MR0175 / ISO 15156 Compliant Available?	-SG Designator Required	NORSOK M-630/M-650 Available?	NACE Compliant Example Part Number	Compliant with NACE Table #
SS	316	YES	YES	NO	SS-3NBS4-SG	A.2
SSD	316/316L	YES	YES	NO	SSD-3NBS4-SG	A.2
M (N Series Only)	alloy 400	YES	NO	NO	M-3NBS4-M	A.13
HC (N Series Only)	alloy C-276	YES	NO	NO	HC-3NBS4-HC	A.14
625	alloy 625	YES	NO	NO	625-3NBS4-625	A.14
825	alloy 825	YES	NO	NO	825-3NBS4-825	A.14
2507	2507	YES	See 3.1.2	Note 1 (see 3.1.3)	2507-3NBS4-49151	A.24
6MO (N Series Only)	6-moly	YES	NO	Note 1	6MO-6NBS8-6MO	A.8

Note 1: NORSOK may be available for this configuration. Please contact VSG technical service for additional information.



NACE AND NORSOK COMPLIANT VALVES

SCS-00193
Rev. A
DCN # 00166600
DCN Date: Jan 08, 2019
Page 2 of 5

Printed copies are uncontrolled unless marked "CONTROLLED" in red.
Uncontrolled copies must be verified as current before use.

3.2 60 Series

- 3.2.1 The components that are wetted by the system media are the center body, flanges, support rings, stem and ball.
- 3.2.2 The materials used to manufacture alloy 600 and titanium valves are not defined as complaint materials in NACE MR0175O/ISO 15156-3:2015 (ref. 2.1).
- 3.2.3 Certificates of compliance to NACE MR0175/ISO 15156-3:2015 (ref. 2.1) are not offered for carbon steel and brass valves.

Valve Material Designator	Material	NACE MR0175 / ISO 15156 Compliant Available?	-SG Designator Required	NORSOK M-630/M-650 Available?	NACE Compliant Example Part Number	Compliant with NACE Table #
SS	316	YES	YES	NO	SS-63TS8-SG	A.2
M	alloy 400	YES	NO	NO	M-63TS8	A.13
C20	alloy C-20	NO	N/A	NO	N/A	-
HC	alloy C-276	NO	N/A	NO	N/A	A.14
625	alloy 625	YES	NO	NO	625-63TS8	A.14
825	alloy 825	YES	NO	NO	825-63TS8	A.14
2507	2507	YES	YES	NO	2507-63TS8-SG	A.24
2507	2507	NO	NO	Note 1	-	-
6MO	6-moly	YES	NO	Note 1	6MO-63TS8	A.8

Note 1: NORSOK may be available for this configuration. Please contact VSG technical service for additional information.



NACE AND NORSOK COMPLIANT VALVES

SCS-00193
Rev. A
DCN # 00166600
DCN Date: Jan 08, 2019
Page 3 of 5

Printed copies are uncontrolled unless marked "CONTROLLED" in red.
Uncontrolled copies must be verified as current before use.

3.3 83 Series

- 3.3.1 The components that are wetted by the system media are the body, end screws, seat carrier, and seat carrier guide.
- 3.3.2 2507 NACE MR0175/ISO 15156-3:2015 (ref. 2.1) compliant valves should be ordered with the – SG suffix instead of -49152.
- 3.3.3 NORSOK M-630 (re. 2.2) compliant 2507 valves should be ordered with the -40789 suffix. See process sheet PS-40789.
- 3.3.4 H83 valves are not available for sour gas applications.**

Valve Material Designator	Material	NACE MR0175 / ISO 15156 Compliant Available?	-SG Designator Required	NORSOK M-630/M-650 Available?	NACE Compliant Example Part Number	Compliant with NACE Table #
SS	316	YES	YES	NO	SS-83PS4-SG	A.2
M	alloy 400	YES	NO	NO	M-83PS4	A.13
625	alloy 625	YES	NO	NO	625-83PS4	A.14
825	alloy 825	YES	NO	NO	825-83PS4	A.13 / A.14
2507	2507	YES	YES	NO	2507-83PS4-SG	A.24
2507	2507	NO	NO	Note 1 (see 3.3.3)	-	-
6MO	6-moly	YES	NO	Note 1	6MO-83PS4	A.8

Note 1: NORSOK may be available for this configuration. Please contact VSG technical service for additional information.



NACE AND NORSOK COMPLIANT VALVES

SCS-00193
Rev. A
DCN # 00166600
DCN Date: Jan 08, 2019
Page 4 of 5

Printed copies are uncontrolled unless marked "CONTROLLED" in red.
Uncontrolled copies must be verified as current before use.

3.4 CH Series

- 3.4.1 The components that are wetted by the system media are the inlet and outlet body, poppet, poppet stop and spring.
- 3.4.2 For 316 SS NACE MR0175/ISO 15156-3:2015 (ref. 2.1) compliant CH check valves, customers must use the -14185 designator for valves with Swagelok end connections and the -14187 designator for valves with non-Swagelok end connections instead of the -SG suffix. See process sheets PS-14185 and PS-14187.
- 3.4.3 For 2507 NACE MR0175/ISO 15156-3:2015 (ref. 2.1) compliant CH check valves, customers must use the -49149 designator.
- 3.4.4 6MO material sour gas option is available with ¼" size (CH4) only. Other sizes are available without sour gas compliance.

Valve Material Designator	Material	NACE MR0175 / ISO 15156 Compliant Available?	-SG Designator Required	NORSOK M-630/M-650 Available?	NACE Compliant Example Part Number	Compliant with NACE Table #
SS	316	YES	see 3.4.2	NO	SS-CHS4-1-14185 SS-CHF4-1-14187	A.2
M	alloy 400	YES	YES (if customer wants EPDM seals, otherwise see below)	NO	M-CHS4-SG-1	A.13
M	alloy 400	YES	NO	NO	M-CHS4-1	A.13
625	alloy 625	YES	NO	NO	625-CHS4-1	A.14
825	alloy 825	YES	NO	NO	825-CHS4-1	A.13 / A.14
2507	2507	YES	see 3.4.3	NO	2507-CHS4-1-49149	A.24
6MO	6-moly	YES (see 3.4.4)	NO	Note 1	6MO-CHS4-1	A.8

Note 1: NORSOK may be available for this configuration. Please contact VSG technical service for additional information.



NACE AND NORSOK COMPLIANT VALVES

SCS-00193
Rev. A
DCN # 00166600
DCN Date: Jan 08, 2019
Page 5 of 5

Printed copies are uncontrolled unless marked "CONTROLLED" in red.
Uncontrolled copies must be verified as current before use.

4.0 Process Sheet Scopes

- 4.1** 14185: This is for CH series check valves with Swagelok end connections made from annealed stainless steel material for sour gas applications. The internals are alloy 400, except for the alloy 600 spring. The raw material used in manufacturing of the body can be from an assortment of shapes, i.e. hex bar, round bar, square bar, etc.
- 4.2** 14187: This is a non-Swagelok ended stainless steel CH Series check valve and XS flow valve that will be used in sour gas applications. The valve contains inlet and outlet bodies which are annealed after manufacturing, alloy 400 internal components and an alloy 600 spring. This valve assembly will meet the current NACE MR0175/ISO15156.
- 4.3** 40789: Applicable to any 2507 83 or 83X valve with all 2507 components made from raw material that meets NORSOK M-650 requirements.
- 4.4** 41253: Applicable to any 2507 N or HN series valve with all 2507 components made from raw material that meets NORSOK M-650 requirements. This process sheet should no longer be required as standard 2507 material should be sourced from NORSOK M-650 compliant suppliers. Check material specification and material certifications as necessary.
- 4.5** 49149: This Process Sheet is applicable to any 2507 CH series check valve with NACE compliance. Inlet and outlet bodies will be machined from annealed bar. Other materials will be standard for a 2507 CH series.
- 4.6** 49151: This Process Sheet is applicable to any 2507 N series needle valve with NACE compliance. A bonnet manufactured from annealed bar or forge rod is required. Stem components will be alloy 400 as standard for stainless steel N series with -SG designator.
- 4.7** 49152: Applicable to a 2507 83 series with NACE compliance. 2507 end screw is machined from forged rod or annealed bar. Valve include alloy 400 stem, carrier guides, seat carrier and ball.