

Specification for Subsurface Safety Valve Equipment

API SPECIFICATION 14A
TWELFTH EDITION, JANUARY 2015

EFFECTIVE DATE: JANUARY 15, 2016

ERRATA, JULY 2015

ADDENDUM, JUNE 2017

REAFFIRMED, JULY 2020



Date of Issue: June 2017

Affected Publication: API Specification 14A, *Specification for Subsurface Safety Valve Equipment*, Twelfth Edition, January 2015

Addendum 1

Page 14, the top two rows of Table 1 shall be changed to the following:

V4-1	Validation grade V4-1 shall only be used for SSSVs that have a validation test date prior to the effective date of this specification and do not meet the HPHT definition within 3.1.15. The validation requirements are specified in Annex B and are equivalent to API 14A, 9th, 10th, and 11th editions, Class 1 requirements.	1—standard service
V4-2	Validation grade V4-2 shall only be used for SSSVs that have a validation test date prior to the effective date of this specification and do not meet the HPHT definition within 3.1.15. The validation requirements are specified in Annex B and are equivalent to API 14A, 9th, 10th, and 11th editions, Class 2 requirements.	2—sandy service

Page 32, Section 5.8.3c, shall be changed to the following:

- c) the scaled valves shall not have more dynamic leak paths in either the closure mechanism or control system integral to the SSSV than the base design;

Page 40, Section 6.4.3.2.1.C.3, shall be changed to the following:

- 3) thermoplastics and other materials in accordance with ASTM D2240 or ASTM D785, as appropriate.

Page 116, Table H.3, shall be changed to the following:

Parameter	Specification
Tensile strength (at either break or yield as applicable)	ASTM D638 or D1708
Elongation (at either break or yield as applicable)	ASTM D638 or D1708
Modulus of elasticity	ASTM D638
Flexural modulus	ASTM D790
Creep failure as applicable	ASTM D2990

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Contents

	Page
1	Scope 1
2	Normative References 1
3	Terms, Definitions, Acronyms, Abbreviations, and Symbols 4
3.1	Terms and Definitions 4
3.2	Acronyms, Abbreviations, and Symbols 10
4	Functional Specification 10
4.1	General 10
4.2	Functional Requirements 10
4.3	SSSV Functional Characteristics 11
4.4	Well Parameters 11
4.5	Operational Parameters 12
4.6	Environmental Compatibility 12
4.7	Compatibility with Related Well Equipment 13
4.8	Insert SSSV Considerations 13
4.9	User/Purchaser Grade Selection 13
5	Technical Specification 15
5.1	Technical Requirements 15
5.2	Technical Characteristics of SSSV 15
5.3	Design Criteria 16
5.4	Design Verification 20
5.5	Design Validation 24
5.6	Equipment Performance Ratings 30
5.7	Design Changes 30
5.8	Design Validation by Scaling for SSSVs 31
5.9	Functional Test 32
5.10	Alternate Technologies 32
5.11	Design Assessment 33
6	Supplier/Manufacturer Requirements 34
6.1	General 34
6.2	Documentation and Data Control 34
6.3	Product Identification 39
6.4	Quality Control 39
6.5	Functional Testing 48
6.6	Failure Reporting and Analysis 48
7	Repair/Redress 49
7.1	Repair 49
7.2	Redress 49
8	Storage and Preparation for Transport 49
	Annex A (normative) Test Agency Requirements 50
	Annex B (normative) Validation Testing Requirements 53

Contents

	Page
Annex C (normative) Functional Testing Requirements	83
Annex D (normative) Supplier/Manufacturer Validation Testing Requirements for V2 and V3	93
Annex E (informative) Alternative Requirement for Closure Mechanism Minimal Leakage	96
Annex F (normative) Design Validation Requirements for Secondary Tools	97
Annex G (normative) Validation Grade V1 Requirements	99
Annex H (normative) Verification and Validation Requirements for High-pressure, High-temperature Environment	112
Annex I (informative) Extended Sand Endurance Testing	120
Annex J (informative) Combined Loads Operational Test	125
Annex K (informative) Gas Slam Closure Testing	129
Annex L (informative) Dynamic Seal System Test	132
Annex M (informative) Rated Performance Envelope	134
Annex N (informative) Use of API Monogram by Licensees	136
Bibliography	139
Figures	
B.1 Example of Characteristic Hydraulic Control Pressure Curve for SCSSVs	54
G.1 Example of an Operating Life Test Profile	100
M.1 Rated Performance Envelope Example	134
Tables	
1 Cross-reference of Classes of Service to Validation Grades	14
2 Additional Tests	15
3 Design Validation Grade Coverage	25
4 Maximum Defect Severity Levels for Castings	44
B.1 Test Agency SCSSV V3 Steps	55
B.2 Test Agency SCSSV V2 Steps	56
B.3 SCSSV Gas Flow Test	57
B.4 SCSSV Gas Flow Rates	58
B.5 TRSV Drift Test	59
B.6 WRSV Drift Test	60
B.7 SSSV Liquid Leakage Test	61
B.8 Unequalized Opening Test-SCSSV	62
B.9 Operating-pressure Test-SCSSV	63
B.10 Propane Test-SSSV	64
B.11 Nitrogen Leakage Test-SSSV	65
B.12 V3 Water Flow Test-SCSSV	66
B.13 SCSSV Liquid Flow Rates	67
B.14 Controlled-temperature Test-SCSSV	68
B.15 V2 Slurry Flow Test-SCSSV	70

Contents

	Page
B.16 V2 Liquid Flow Rates	71
B.17 Test Agency SSCSV V3 Steps	72
B.18 Test Agency SSCSV V2 Steps	72
B.19 Gas Closure Test-SSCSV	73
B.20 Liquid Closure Test-SSCSV	74
B.21 Propane Test-SSCSV	75
B.22 V3 Liquid Flow Test-SSCSV	76
B.23 SSCSV Liquid Flow Rates	77
B.24 V2 Slurry Flow Test-SSCSV	77
B.25 Test Agency SSISV V3 Steps	79
B.26 Gas Injection Test-SSISV	80
B.27 Liquid Injection Test-SSISV	81
B.28 V3 Liquid Flow Test-SSISV	81
C.1 Functional Test Procedure-SCSSV	84
C.2 Functional Test Procedure-Velocity-type SSCSV	88
C.3 Functional Test Procedure-Tubing-Pressure-type SSCSV	89
C.4 Functional Test Procedure-SSISV	90
G.1 Operating Life Test at Minimum Rated Operating Temperature	101
G.2 Operating Life Test at Maximum Rated Operating Temperature with Intermediate Testing at Ambient Temperature	102
G.3 Operating Cycle Test at Maximum Operating Temperature	105
G.4 Hydraulic Control Line Chamber Evaluation	106
G.5 Closure Mechanism Differential Slam Open Test	107
G.6 Equalization Mechanism Endurance Test	109
H.1 Nonmetal Material Additional Specification Requirements	115
H.2 Elastomeric Material Additional Specification Requirements	115
H.3 Thermoplastic Material Additional Specification Requirements	116
I.1 Extended Sand Endurance Test	121
J.1 Combined Loads Operational Test	127
K.1 Gas Slam Closure Test	129
L.1 Dynamic Seal System Testing	133

Introduction

This specification has been developed by users/purchasers and suppliers/manufacturers, of subsurface safety valves intended for use in the petroleum and natural gas industry worldwide. This specification is intended to give requirements and information to both parties in the selection, manufacture, testing, and use of subsurface safety valves. Furthermore, this specification addresses the minimum requirements with which the supplier/manufacturer is to comply so as to claim conformity with this specification.

Users of this specification should be aware that requirements above those outlined in this specification may be needed for individual applications. This specification is not intended to inhibit a supplier/manufacturer from offering, or the user/purchaser from accepting, alternative equipment or engineering solutions. This may be particularly applicable where there is innovative or developing technology. Where an alternative is offered, the supplier/manufacturer should identify any variations from this specification and provide details.

The requirements for lock mandrels and landing nipples contained in prior editions of this specification are now included in API 14L.

This edition of the specification has been revised to include validation grades with accompanying test requirements for subsurface safety valves and requirements for HPHT subsurface safety valves, subsurface injection safety valves, and secondary tools used with subsurface safety valves. Design verification requirements were expanded and new or alternate technologies for operating systems are now covered. The previous validation requirements that encompassed classes of service were changed to validation grades as illustrated in Table 1.

Subsurface Safety Valve Equipment

1 Scope

This specification provides the requirements for subsurface safety valves (SSSVs), and the secondary tools as defined herein necessary to operate the features included within them, including all components that establish tolerances and/or clearances that may affect performance or interchangeability of the SSSV components. It includes repair operations and the interface connections to control conduits and/or other equipment, but does not cover the connections to the primary well conduit.

NOTE The SSSV is an emergency fail-safe flow controlling safety device. The products covered within this specification are installed and operated to the requirements of API 14B.

This specification does not cover installation, maintenance, control systems for SSSV, computer systems, and control conduits not integral to the downhole SSSV. Also not included are products and capabilities covered under API 19G Parts 1 through 4, API 14L, API 11D1, API 6A, API 17C, API 19V, and the following products: downhole chokes, wellhead plugs, sliding sleeves, downhole well test tools, or casing mounted flow control valves.

Redress activities for SSSVs and secondary tools are beyond the scope of this specification and included in API 14B.

If product is supplied bearing the API Monogram and manufactured at a facility licensed by API, the requirements of Annex N apply

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API *Manual of Petroleum Measurement Standards (MPMS)*, Chapter 10.4, *Determination of Water and/or Sediment in Crude Oil by the Centrifuge Method (Field Procedure)*

API Specification 5B, *Specification for Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads*

API Recommended Practice 13B-1, *Recommended Practice for Field Testing Water-based Drilling Fluids*

API Recommended Practice 14B, *Design, Installation, Repair and Operation of Subsurface Safety Valve Systems*

API Specification 14L, *Specification for Lock Mandrels and Landing Nipples*

API Specification 17F, *Specification for Subsea Production Control Systems*, Second Edition

API Specification 20A, *Carbon Steel, Alloy Steel, Stainless Steel, and Nickel Base Alloy Castings for Use in the Petroleum and Natural Gas Industry*

ANSI/NACE MR0175¹, *Petroleum and natural gas industries—Materials for use in H₂S-containing environments in oil and gas production—Parts 1, 2, and 3* (Identical to ISO 15156-1:2009, 15156-2:2009, and 15156-3:2009)

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