Specification for Subsurface Safety Valve Equipment

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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 sealed valve 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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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001, standards@api.org.

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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 MR0175 [1], *Petroleum and natural gas industries—Materials for use in H_2S-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)

[1] American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, New York 10036, www.ansi.org.