Sandy Service Test of Safety and Shutdown Valves

API STANDARD 6AV1
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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001, standards@api.org.

Contents

Figures

Tables

Introduction

The validation of wellhead/tree surface safety valves (SSVs), underwater safety valves (USVs), and boarding shutdown valves (BSDVs) is an important part of determining their fitness for service. The changes incorporated with this edition of API 6AV1 include but are not limited to the following:

— 6AV1 was reworded to accommodate USVs per API 17D.

— This edition clarifies that the 6AV1 sandy service class III test can be used for other valve bore sizes and applications other than safety valve, based on the agreement between the manufacturer and purchaser.

Sandy Service Test of Safety and Shutdown Valves

1 Scope

This standard identifies the design validation procedure requirements for a service class II or service class III API 6A surface safety valve (SSV), API 6A boarding shutdown valve (BSDV), or API 17D underwater safety valve (USV). Service class II is applicable to the validation of the valve bore sealing mechanism to seal performance in the presence of hard substances, such as sand. Service class III adds additional validation requirements for the performance in a similar environment of bonnet assembly sealing parts, including the stem seals.

This standard does not apply to validation of a service class I valve design or to validation of the actuator for actuated valves.

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 Specification 6A, *Specification for Wellhead and Tree Equipment*

API Specification 17D, *Specification for Subsea Wellhead and Tree Equipment*

API Manual of Petroleum Measurement Standards (MPMS), Chapter 10, *Determination of Sediment and Water in Crude Oil by the Centrifuge Method (Field Procedure)*

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

3 Terms, Definitions, and Abbreviations

3.1 Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1
actuator
A mechanism for the remote or automatic operation of a valve or choke.

3.1.2
sandy service
An application where the retained fluid contains particulates, such as sand.

3.1.3
substantive change
A significant modification to a product that affects its service or performance as specified or intended.

3.1.4
test agency
An independent third party that provides a test facility and administers a testing program that meets the test valve validation requirements of this standard.

3.1.5
test valve
An actuated valve that conforms to 4.4.1 or 4.4.2 of this standard.