Standard for Fire Test for End Connectors

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Introduction

This standard is under the jurisdiction of the API Subcommittee on Valves and Wellhead Equipment (API Subcommittee 6). This standard is the result of updating the requirements from API Specification 6FB, Third Edition. This standard covers the requirements for test and evaluation of the performance of API 6A and API 6D end connectors when exposed to specifically defined fire conditions.

Standard for Fire Test for End Connectors

1 Scope

The purpose of this standard is to establish the requirements for testing and evaluating the pressure-containing performance of end connectors designated in API standards when exposed to fire or fire with bending. The performance requirements of this standard establish standard qualification criteria for all sizes and pressure ratings of end connectors.

This standard establishes acceptable levels for external leakage through an end connector after exposure to a fire for a 30-minute time period. The fire exposure has been established on the basis that it represents the maximum time required to extinguish most fires. Fires of greater duration are of a major magnitude with consequences greater than those anticipated in this test.

This standard covers but is not limited to API 6A and API 6D end connectors.

This standard does not intend to address the qualification of valves, wellhead seals, or other related equipment.

2 Normative References

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies, except that new editions may be used on issue and shall become mandatory upon the effective date specified by the publisher or 6 months from the date of the revision (where no effective date is specified).

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

API Specification 6D, *Specification for Pipeline Valves and Piping Valves*

API Technical Report 6AF, *Technical Report on Capabilities of API Flanges Under Combinations of Load*

API Technical Report 6AF1, *Technical Report on Temperature Derating on API Flanges under Combination Loading*

API Technical Report 6AF2, *Technical Report on Capabilities of API Integral Flanges Under Combinations of Loading—Phase II*

3 Terms, Definitions, Acronyms, Abbreviations, Symbols, and Units

3.1 Terms and Definitions

For the purpose of this standard, the following definitions and the definitions in API 6A and API 6D shall apply. When identical terms are defined in API 6A and API 6D and this standard, the following definitions shall apply.

3.1.1
connector family
Group of connectors that are based on the same design specifications or standards.

3.1.2
pressure class
Numerical pressure design class expressed in accordance with the ASME rating class.