Inspection of Pressure-relieving Devices

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Inspection of Pressure-relieving Devices

1 Scope

This recommended practice (RP) describes the inspection and repair practices for self-actuated pressure-relieving devices (PRDs) commonly used in the oil/gas and petrochemical industries. As a guide to the inspection and repair of these devices in the owner-operator's plant, it is intended to ensure their proper performance. This publication covers self-actuated devices such as direct-acting spring-loaded valves, pilot-operated pressure-relief valves (PRVs), rupture disks, pin-actuated devices, and weight-loaded pressure vacuum vents.

The recommendations in this publication are not intended to supersede requirements established by regulatory bodies. This publication excludes tank weak seams and/or sections or tank thief hatches, explosion doors, fusible plugs, control valves, pressure-regulating devices, integral rotating equipment components, other devices that either depend on an external source of power for operation or are manually operated, or devices not designed to be inspected or recertified. Inspections and tests made at manufacturers' plants, which are usually covered by codes or purchase specifications, are not covered by this publication.

This publication does not cover training requirements for personnel involved in the inspection and repair of PRDs. Those seeking these requirements should see API 510 and API 570, which give the requirements for a quality control system and specify that the repair organization maintain and document a training program ensuring that personnel are qualified.

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 510, *Pressure Vessel Inspection Code: In-service Inspection, Rating, Repair, and Alteration*

API Standard 520 (all parts), *Sizing, Selection, and Installation of Pressure-relieving Devices*

API Standard 521, *Pressure-relieving and Depressuring Systems*

API Standard 526, *Flanged Steel Pressure-relief Valves*

API Standard 527, *Seat Tightness of Pressure Relief Valves*

API 570, *Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems*

API Recommended Practice 580, *Elements of a Risk-Based Inspection*

API Standard 2000, *Venting Atmospheric and Low-pressure Storage Tanks*

ASME *Boiler and Pressure Vessel Code* (*BPVC*) [1], *Section I, Rules for Construction of Power Boilers*

ASME *Boiler and Pressure Vessel Code* (*BPVC*), *Section VIII: Rules for Construction of Pressure Vessels; Division 1*

ASME *Boiler and Pressure Vessel Code (BPVC), Section XIII, Rules for Overpressure Protection*

ASME PTC 25, *Pressure Relief Devices—Performance Test Codes*

NBBI NB-18 [2], *Pressure Relief Device Certification*

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[1] ASME International, Two Park Avenue, New York, NY 10016-5990, www.asme.org.