Flanged Steel Pressure-relief Valves

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Downstream Segment

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Foreword

This standard is a purchase specification for flanged steel pressure-relief valves including direct spring-loaded pressure-relief valves and pilot-operated pressure-relief valves.

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Suggested revisions are invited and should be submitted to the Standards Department, API, 1220 L Street, NW, Washington, D.C. 20005, standards@api.org.

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1 Scope

This standard is a purchase specification for flanged steel pressure-relief valves. Basic requirements are given for direct spring-loaded pressure-relief valves and pilot-operated pressure-relief valves as follows:

— orifice designation and area;

— valve size and pressure rating, inlet and outlet;

— materials;

— pressure-temperature limits;

— center-to-face dimensions, inlet and outlet.

Nameplate nomenclature and requirements for stamping are detailed in Annex A.

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 Recommended Practice 520 (all parts), *Sizing, Selection, and Installation of Pressure-Relieving Devices in Refineries*

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

ASME B16.5 [1], *Pipe Flanges and Flanged Fittings*

ASME B16.34, *Valves-Flanged, Threaded and Welding End*

ASME *Boiler and Pressure Vessel Code (BPVC), Section VIII: Pressure Vessels, Division 1 and Division 2*

ASME *BPVC*, *Section II: Materials:*

ASME SA-216, *Carbon-Steel Castings Suitable for Fusion Welding for High-Temperature Service*

ASME SA-217, *Martensitic Stainless Steel and Alloy Steel Castings for Pressure-Containing Parts, Suitable for High-Temperature Service*

ASME SA-351, *Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts*

ASME SA-494, *Specification for Castings, Nickel and Nickel Alloy*

3 Terms and Definitions

Pressure relief valve terminology is defined in API 520, Part I.

4 Responsibility

4.1 The purchaser is primarily responsible for the following:

a) selecting the type of pressure-relief valve and the required pressure-temperature ratings;

[1] ASME International, 3 Park Avenue, New York, New York 10016, www.asme.org.