Welding Guidelines for the Chemical, Oil, and Gas Industries

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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.

Contents

Welding Guidelines for the Chemical, Oil, and Gas Industries

1 Scope

1.1 This recommended practice provides supplementary guidelines and practices for welding and welding-related topics for shop and field fabrication, repair, and modification of the following:

a) pressure-retaining equipment, such as pressure vessels, heat exchangers, piping, heater tubes, and pressure boundaries of rotating equipment and attachment welds;

b) tanks and attachment welds;

c) nonremovable internals for process equipment;

d) structural items attached and related to process equipment;

e) other equipment or component items when referenced by an applicable purchase document.

1.2 This document is general in nature and augments the welding requirements of ASME *Boiler and Pressure Vessel Code* (*BPVC*) Section IX, ISO 15614, and similar codes, standards, specifications, and practices, such as those listed in Section 2 of this document. The intent of this document is to be inclusive of chemical, oil, and gas industry standards, although there are many topics not covered herein.

1.3 Welding related to fabrication of the following equipment or components is excluded from the scope of this specification:

a) structures;

b) pipelines;

c) subsea production systems;

d) marine related equipment (e.g. ballasting pipework, systems covered by classification societies);

e) wellheads, drilling, and downhole equipment;

f) bulk material components covered by a manufacturer's material certificate (e.g. seam welded pipe and fittings, clad pipe);

g) heating, cooling, and air conditioning;

h) nonmetallic materials;

i) other fabrication methods (e.g. bending and forming, brazing, and mechanical connections).

1.4 This document is based on industry experience. Restrictions or limitations may be waived or augmented by the owner/operator or purchaser.

1.5 Structural welds that are not welded to process equipment are outside the scope of this document.

1.6 Safety and health issues and concerns are beyond the scope of this recommended practice and, therefore, are not fully addressed herein. Safety and health information is available from other sources, including, but not limited to, the following: