

GENERAL SPECIFICATION

PIPING VALVES VESSELS

GS EP PVV 172

Hot tapping

05	10/2015	Complete re-writing
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Rev.	Date	Purpose of the revision

Owning entity: DSO/TEC

Managing entity: DSO/TEC/PVV

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1. Scope

This General Specification defines the requirements for a hot tap connection onto a pipe.

A hot tap connection consists in two main operations: the welding of a branch connection to a pipe in charge and then the drilling of this pipe through the branch.

Considering the Safety and Environmental risks associated to this activity, a comprehensive risk analysis shall be performed and validated by both the HSE discipline and the site representative before to proceed.

The present General Specification deals with the technical aspects of hot tapping.

This General Specification is relevant only to hot tapping on carbon steel (any material grade up to grade API 5L X60) and austenitic stainless steels (grades TP 304L, TP 316L and TP 321) as listed in the general specification [GS EP PVV 112](#).

Hot tapping on other materials is outside the scope of this general specification. Hot tap on such materials is subject to derogation and shall be agreed by the managing entity, identified on the front page of the document.

The project particular specification shall address all requirements of the present general specification, be limited to the related scope and describe fully the context of the intended operation with detailed list of all potential HSE issues for the full duration of the whole operation. The Safety and Operational rules applicable on the site for the SIMOPS and Hot Works must be carefully implemented.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

Any conflict between any of the Contractual Reference Documents, or between this specification and any other Contractual Reference Document, shall be reported to the Company for decision. In such a case, and unless otherwise agreed or decided by the Company, it is understood that the more stringent requirement shall apply.

Exceptions to, or deviations from this specification are not permitted unless previously accepted in writing by the managing entity named on the front page. For this purpose, Manufacturer's requests for substitution or change of any kind shall be complete with all pertinent information required for the Company assessment.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
API RP 2201	Safe Hot Tapping Practices in the Petroleum & Petrochemical Industries
ASME B31.3	Process Piping
ASME BPVC Section IX	Welding, Brazing, and Fusing Qualifications

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Reference	Title
ASME BPVC Section VIII Div 2	Rules for Construction of Pressure Vessels - Alternative Rules
ASME PCC-2	Repair of Pressure Equipment and Piping
EEMUA 185	Guide for Hot Tapping on Piping and Other Equipment

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
GS EP PVV 107	Piping Stress Analysis
GS EP PVV 112	Piping material classes
GS EP PVV 142	Valves
GS EP PVV 143	Metallic pipes
GS EP PVV 144	Fittings
GS EP PVV 145	Flanges
GS EP PVV 146	Bolting for piping
GS EP PVV 147	Gasket for piping and vessels
GS EP PVV 171	Steel piping fabrication
GS EP PVV 611	Welding of pressure containing piping and equipment

3. Preliminary analysis of the job

Hot tapping is potentially hazardous and therefore shall not be undertaken unless it is demonstrated that it is technically feasible and that any potential safety and environmental risk may be controlled.

A decision on whether hot tapping is to be applied shall be based on careful considerations as detailed in sections 4 and 5 of [API RP 2201](#):

- Job Analysis
- Hazard evaluation and risk reduction for hot tapping on in-service equipment.

Any hot tapping operation shall be carefully monitored as per detailed in the section 8.1 below.