



PROCESS
INDUSTRY
PRACTICES

TECHNICAL REVISION
May 2024

Pipeline Systems

PIP PLSC0018
Requirements for Welder Qualifications
in Accordance with ASME B31.1104

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PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

This Practice has been prepared by harmonizing technical requirements from existing standards of major industrial operators, contractors, and standards development organizations. While this Practice is intended to incorporate the majority of requirements, individual applications may have requirements which take precedence over this Practice. Determinations concerning fitness for purpose or application of this Practice to specific project or engineering situations should not be made solely on information contained in this Practice. All Practices are intended to be consistent with applicable laws and regulations. Should this Practice conflict with applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by this Practice.

Use of trade names should not be viewed as an expression of preference. Other brands having the same specifications are equally correct and may be substituted for those named.

This Practice is subject to revision at any time. For more information refer to PIP ADG001, *Specification for Developing Practices*.

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1. Scope

This Practice provides minimum requirements for qualifying welders in accordance with *API 1104*. Welder qualification tests are given to determine the ability of the welder to make sound welds using qualified weld procedures (WPS).

For welder qualification requirements in accordance with *ASME Section IX*, see *PIP PLSC0017*.

2. References

Applicable parts of the following Practices and industry codes and standards shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PLSC0017 - *Standards for Welder Qualifications per ASME Section IX*

2.2 Industry Codes and Standards

- American Petroleum Institute (API)
 - *API 1104 - Welding of Pipelines and Related Facilities*
- The American Society of Mechanical Engineers (ASME)
 - *Boiler and Pressure Vessel Code, Section IX: Welding and Brazing Qualifications*

3. Definitions

owner: Party who owns facility wherein piping will be used

purchaser: Party who awards contract to the supplier. Purchaser may be owner or owner's authorized agent.

supplier: Party responsible for providing installation of piping

4. Requirements

4.1 General

- 4.1.1 The qualification of welders shall be performed by and in the presence of an American Welding Society Certified Welding Inspector (CWI).
- 4.1.2 All welders shall initially qualify by destructive testing, unless non-destructive testing (NDT) is authorized for butt welds only as an exception by the authorized CWI.
- 4.1.3 Before starting the qualification test, the welder shall be permitted a reasonable amount of time to adjust the welding equipment used in the test.