

# Findings Welding Procedure Qualification Record per ASME Section IX.

WPS NASA-A572-SMAW Rev 1  
PQR NASA-A572-SMAW -PQR Last Certified 4/24/13  
Client Sample  
Welding document owner NASA  
Date of review 10/8/2025

Client has final deposition responsibility.

- ☐ Accepted as submitted  
☐ Accepted with verbal confirmation  
    ☐ Correction or addenda required prior to next submission  
    ☐ Correction or addenda recommended  
☐ Accepted with written confirmation  
    ☐ certification statement required)  
    ☐ Correction or addenda required prior to next submission  
    ☐ Correction or addenda recommended  
☐ Rejected - Correction/addenda or additional testing required and recertification required

Red line item	Paragraph	Discrepancy	WPS Services ranking
A	QW-403.1	P number not explicitly expressed, it is implicitly addressed by material spec. P#1	Comment only
B	QW-407.1	PWHT is an essential variable, it is applicable and must be addressed. N/A does not address the variable (see below)	Major- code violation
C	QW-403.9	PQR does not record and certify maximum pass thickness. (limits WPS thickness if not addressed)	Severe- potential code violation
D	QW-109.2	Variable does not apply to manual welding <i>oscillation</i> : for a machine or automatic process, an alternating motion relative to the direction of travel of welding, brazing, or thermal spray device. See also <i>weave bead</i> . <i>weave bead</i> : for a manual or semiautomatic process, a weld bead formed using weaving.	Inconsequential
E	QD-102	T.G. Moore is employed by Insp. Specialists not Jacobs, a certification signature is required The organization shall certify the PQR by a signature or other means as described in the organization's quality program.	Moderate – code potential code violation.
F	none	Lab reports should be traceable to PQR not WPS. WPS may use full range of allowed variables, PQR coupon used recorded variables and is what ASME requires to be tested	comment

**QG-102** The procedure qualification record (PQR) documents what occurred during the production of a procedure qualification test coupon and the results of testing that coupon

**QW-200.2** *Procedure Qualification Record (PQR)*. The PQR is a record of variables recorded during the welding of the test coupons. It also contains the test results of the tested specimens.

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Nonessential or other variables used during the welding of the test coupon may be recorded at the organization's option. All variables, if recorded, shall be the actual variables (including ranges) used during the welding of the test coupon. If variables are not monitored during welding, they shall not be recorded.

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*Changes to the PQR*. Changes to the PQR are not permitted except as described below. Editorial corrections or addenda to the PQR are permitted.

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All changes to a PQR require recertification (including date) by the organization

**QW-200.2** One or more combinations of welding processes, filler metal, and other variables may be used when welding a test coupon. The approximate thickness of weld metal deposited, excluding weld reinforcement, shall be recorded for each set of essential and, when required, supplementary essential variables. Weld metal deposited using each set of variables shall be included in the tension, bend, toughness, and other mechanical test specimens that are required.

**Auditing of Welding Under ASME Section IX** It should be noted that Interpretation IX-83-03 says that omission of an essential or nonessential variable from a WPS (for example, by leaving a space on a form blank or simply not addressing the variable) does not meet the Section IX requirement to address the variable.... Leaving a blank or "N/A" on the PQR would not document whether or not PWHT had been performed on the test piece, and leaving a blank or "N/A" on the WPS would not prohibit PWHT from being done.