TECHNICAL SPECIFICATIONS

Index of active WPS/PQR documents — current as of 2025

MAC Industrial maintains an active library of Welding Procedure Specifications (WPS) and supporting Procedure Qualification Records (PQR) covering the base metal and filler metal combinations most commonly encountered in power generation and industrial maintenance work. All procedures are qualified per ASME Section IX.

Welder Performance Qualifications (WPQ) are maintained for all field welding personnel and updated per ASME Section IX continuity requirements (maximum 6-month inactivity without re-qualification).

WPS No.	Process	Base Metal (P-No.)	Filler / Classification	Qualified Positions
WPS-001	SMAW	P-1 (Carbon Steel)	E7018, E7016	1G, 2G, 3G, 4G, 6G
WPS-002	GTAW	P-1 (Carbon Steel)	ER70S-2, ER70S-6	1G, 2G, 5G, 6G
WPS-010	SMAW/GTAW	P-4 (1¼Cr-½Mo / P22)	E8018-B2 / ER80S-B2	6G
WPS-015	GTAW/SMAW	P-5A (9Cr-1Mo / P91)	ER90S-B9 / E9018-B9	6G
WPS-020	SMAW	P-8 (304/316 SS)	E308/E316	1G, 2G, 6G
WPS-025	GTAW	P-8 (304H, 321H SS)	ER308H, ER347	5G, 6G
WPS-030	SMAW/GTAW	P-43 (Super 304H, TP347HFG)	ER347, E347	5G, 6G
WPS-040	SMAW	P-1 to P-8 Dissimilar	ENiCrFe-3 (Inconel 182)	6G
WPS-050	SAW	P-1 (Weld Overlay)	ER308L / ER309L	1G

Material	P-No.	PWHT Required?	Temp Range	Hold Time
Carbon Steel (>¾" wall)	P-1	Yes (wall-dependent)	1100–1200°F	1 hr/inch min
P22 (1¼Cr-½Mo)	P-4	Yes	1300–1400°F	1 hr/inch min
P91 (9Cr-1Mo-V)	P-5A	Yes — mandatory	1350–1425°F	2 hr/inch min
304/316 Stainless	P-8	No (typically)	N/A	N/A
Super 304H / 347HFG	P-43	No (typically)	N/A	N/A