

ER 90 S-G (P92) Tig

CATEGORY GMAW-GTAW Solid wires

TYPE Medium alloyed, high-strength creep resistant 9% Chromium alloy.

APPLICATIONS TIG/GTAW wire for high temperature, creep resistant, modified 9%Cr1%Mo martensitic steel (T92/P92). Alloy T92/P92 is widely used in the power generating industry for fossil fuel ultra-super-critical (USC) power plant boilers and turbines; the alloy is also finding applications in the chemical and oil and gas industries.

PROPERTIES T92/P92 steel is commonly used at service temperatures up to 620°C. V, Nb and N additions provide this 'creep strength enhanced ferritic' (CSEF) alloy with improved high temperature creep resistance compared to standard CrMo creep resistant alloys.

CLASSIFICATION AWS A-5.28 : ER 90S-G
EN ISO 21952-A: WZCrMoWNb 9 0.5 1.5

SUITABLE FOR For matching P92, 9%Cr1.7%W0.5%Mo, creep resisting martensitic steels. X10CrWMoVNb 9 2, ASTM: A182 grade F92, A213 grade T92, A335 grade P92, A387 grade 92

APPROVALS CE approved

WELDING POSITIONS:



WELD METAL ANALYSIS %

C	Mn	Si	Cr	Ni	Mo	V	W	Nb
0.1	0.45	0.40	8.80	0.50	0.42	0.20	1.60	0.05

MECHANICAL PROPERTIES

Heat Treatment	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	4d (%)	5d (%)	Impact Energy (J) ISO-V		Hardness HV
					20°C	-20°C	
PWHT	>540	>620	>17	>17			

PWHT 750°C-760°C / 2-3Hr

WELDING PARAMETERS / PACKING

Welding Parameters		Packing	
D (mm)	Current (A)	single	master carton
1,6 x 1000	50-90	5 kg cartons	25 kg cartons
2,4 x 1000	110-180	5 kg cartons	25 kg cartons
3,2 x 1000	150-250	5 kg cartons	25 kg cartons

REDRYING TEMPERATURE not required

GAS ACC. EN ISO: 14175: I1