

TIG welding rods for mild and low alloyed steel

WSG P92								
Classification DIN EN ISO					Classification AWS			
21952-A WZCrMoWVNb 9 0.5 1.5					A5.28 ER90S-G			
Approvals					Material No.			
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Characteristics and application								
TIG/GTAW wire for high temperature, creep resistant, modified 9%Cr1%Mo martensitic steel (T92/P92). 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. 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.								
Base materials								
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								
Typical analysis in %								
C	Si	Mn	Cr	Ni	Mo	W	V	Nb
0,10	0,40	0,44	8,8	0,50	0,40	1,58	0,20	0,05
Typical heat treatment								
Preheat temperature: 200°C Interpass temperature: max. 300°C PWHT: 760°C.								
Mechanical properties of the pure weld metal								
Yield strength in Mpa		Tensile strength in Mpa		Elongation in %		Charpy-V-Value (ISO-V) in J		
≥ 540		≥ 620		4d/5d: ≥17		RT ≥ 47		