

**CATEGORY** GMAW Solid wires

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

**APPLICATIONS** GMAW 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: G ZCrMoWVNb9 0,5 1,5
F-nr	6
FM	3

**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

**WELDING POSITIONS:**



**TYPICAL CHEMICAL ANALYSIS OF THE FILLER METAL (%)**

C	Si	Mn	P	S	Cr	Ni	Mo	V	W
0.1	0.4	0.45	0.008	0.008	8.8	0.5	0.4	0.2	1.6

**ALL WELD MECHANICAL PROPERTIES**

Heat Treatment	R <sub>p0,2</sub> (MPa)	R <sub>m</sub> (MPa)	A <sub>5</sub> (%)	Impact Energy (J) ISO-V RT
730°C- 760°C /2h	540	620	17	110

**WELDING PARAMETERS / PACKING**

D (MM)	WELDING PARAMETERS	CURRENT (A)	WELDING PARAMETERS	PACKING
1,2				15

**REDRYING TEMPERATURE** Not required

**GAS ACCORDING EN 14175** M21