

Classifications

EN ISO 21952-A	AWS A5.28
GZ CrMoWVNb 9 0.5 1.5	ER90S-G / ER90S-B9(mod.)

Characteristics and typical fields of application

High temperature resistant. Suited for joining and surfacing applications with matching high temperature resistant parent metal P92 according to ASTM A 335.

Base materials

1.4901 – X10CrWMoVNb9-2; NF 616;
ASTM A 355 Gr. P92

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	W	V	Nb	N
wt-%	0.1	0.25	0.5	8.5	0.4	0.5	1.6	0.2	0.06	0.04

Structure: Martensite, suitable for quenching and tempering

Mechanical properties of all-weld metal

Heat-treatment	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Impact work ISO-V KV J
	MPa	MPa	MPa	J
(760 °C / ≥ 2 h)	560	720	15	41

Creep rupture properties: According to matching high temperature resistant parent metal

Operating data

Polarity: DC (+)	Shielding gas: (EN ISO 14175) M12, (M13)	Ø mm	Spool:
		0.8	B300
		1.0	B300
		1.2	B300
		1.6	B300

Welding instruction

Materials	Preheating	Cooling	Postweld heat treatment
Matching steels / cast steel grades	200 – 250 °C / 200 – 300 °C (392 – 482 °F / 392 – 572 °F)	≤ 100 °C (212 °F)	Tempering at 760 °C (1400 °F) – at least 2 h / air