

Classifications

EN ISO 21952-A	EN ISO 21952-B	AWS A5.28	AWS A5.28M
G CrMo9Si	G 55 9C1M	ER80S-B8	ER55S-B8

Characteristics and typical fields of application

GMAW solid wire for 9 % Cr 1 % Mo creep resistant steels and steels for hot hydrogen service, particularly for application in oil refineries and the base metals X12CrMo9-1 (P9). Approved in long-term condition up to +600 °C service temperature.

Base materials

Similar alloyed creep resistant steels
1.7386 X12CrMo9-1, 1.7388 X7CrMo9-1, 1.7389 GX12CrMo10
ASTM A217 Gr. C12, A 234 Gr. WP9, A335 Gr. P9

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo
wt.-%	0.07	0.5	0.5	9.0	1.0

Mechanical properties of all-weld metal

Condition	Yield strength R _{p0,2}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V KV J
	MPa	MPa	%	+20 °C
a	≥ 470	≥ 590	≥ 18	≥ 34

a annealed 760 °C / 2 h / furnace down to 300 °C / air – shielding gas Ar + 18 % CO₂

Operating data

	Polarity: DC (+)	Shielding gases: Argon + 15 – 25 % CO ₂	ø (mm) 1.2
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Preheating and interpass temperature 250 – 350 °C. Tempering at 710 – 760 °C for at least 1 h followed by cooling in furnace down to 300 °C / air. For detailed information about the welding technology please contact our service departments.