

Classifications

EN ISO 21952-A	EN ISO 21952-B	AWS A5.28	AWS A5.28M
G CrMo5Si	G 55 M21 5CM	ER80S-B6	ER55S-B6

Characteristics and typical fields of application

GMAW wire suitable for 5 % Cr 0.5 % Mo alloyed steels and steels for hot hydrogen service, particularly in oil refineries. Preferably used for steel grades as X12CrMo5 and P5 at service temperatures up to +650 °C.

The wire shows very good feeding characteristics, resulting in smooth welding and flow behaviour. Uniform copper bonding with low total copper content.

Base materials

High temperature steels and similar alloyed cast steels, QT-steels similar alloyed up to 1180 MPa
1.7362 X12CrMo5

ASTM A 182 Gr. F5; A 193 Gr. B5; A 213 Gr. T5; A217 Gr. C5; A 234 Gr. WP5; A 314 Gr. 501;
A335 Gr. P5 u. P5c; A 369 Gr. FB 5; A 387 Gr. 5; A 426 Gr. CP5

Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo
wt.-%	0.06	0.4	0.5	5.6	0.6

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	520 (≥ 470)	620 (≥ 590)	20 (≥ 17)	200 (≥ 47)
a annealed, 730 °C / 2 h / furnace down to 300 °C / air – shielding gas Ar + 18 % CO ₂				

Operating data

	Polarity: DC (+)	Shielding gases: Argon + 15 – 25 % CO ₂	ø (mm) 1.2
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Preheating and interpass temperatures 150 – 300 °C. Tempering at 730 – 760 °C for at least 1 h followed by cooling in furnace down to 300 °C and still air.