Union S 1 CrMo 9

SAW wire, low-alloyed, creep resistant

Classifications

AWS A5.23 / SFA-5.23	EN ISO 24598-A
EB8	S S CrMo9

Characteristics and typical fields of application

Union S 1 CrMo 9 is a solid wire for submerged arc welding 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.

Recommended SAW flux:
Marathon 543

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

	C	Si	Mn	Cr	Mo
wt.-%	0.08	0.4	0.5	9.1	1.0

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J
	MPa	MPa	%	20°C
a	≥ 435	≥ 590	≥ 18	≥ 34

a annealed 760°C/3 h / furnace down to 300°C / air

Operating data

Dimension mm
3.0

Preheating and interpass temperature 250 – 350 °C. Tempering at 750 – 760 °C for at least 3 h followed by cooling in furnace down to 300 °C / air. For detailed information about the welding technology please contact our service departments.

Approvals

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