

Classifications

low-alloy creep resistant

EN ISO 3580-A:

AWS A5.5:

E CrMo1 B 4 2 H5

E8018-B2H4R

Characteristics and field of use

Basic coated Stick electrode, core wire alloyed, for high quality welded seams in boiler and pipe steels, similar steel qualities, similar alloy quenched and tempered steels, untreated case hardening and nitriding steels. Preferred for 13CrMo4-5. Approved for long-term use in operating temperature ranges up to +570°C. Suitable for step cooling applications (Bruscato 15 ppm). High toughness and crack resistance, weld metal can be quenched and tempered. Very low hydrogen content (under AWS conditions HD ≤ 4 ml/100g). Deposition efficiency about 115 %. Preheating, interpass temperature and subsequent Heat Treatment according to the requirements of the base material in use (for 13CrMo4-5 at 200-250°C, temper after welding at 660-700°C, at least ½ h / furnace down to 300°C / air).

Base materials

same alloy creep resistant steels and cast steel, case-hardening and nitriding steels with comparable composition, heat treatable steels with comparable composition, steels resistant to caustic cracking 1.7335 13CrMo4-5, 1.7262 15CrMo5, 1.7728 16CrMoV4, 1.7218 25CrMo4, 1.7225 42CrMo4, 1.7258 24CrMo5, 1.7354 G22CrMo5-4, 1.7357 G17CrMo5-5 ASTM A 182 Gr. F12; A 193 Gr. B7; A 213 Gr. T12; A 217 Gr. WC6; A 234 Gr. WP11; A335 Gr. P11, P12; A 336 Gr. F11, F12; A 426 Gr. CP12

Typical analysis of all-weld metal (Wt-%)

C	Si	Mn	Cr	Mo	P	As	Sb	Sn
0.08	0.25	0.8	1.1	0.5	≤0.010	≤0.005	≤0.005	≤0.005

Mechanical properties of all-weld metal

Heat Treatment	Yield strength 0.2%	Tensile strength	Elongation (L0=5 ₀)	Impact values ISO-V
	MPa	MPa	%	+40 °C:
t*	480	580	23	160

* 680 °C/2h / furnace down to 300 °C / air

Operating data



Polarity = +

Dimensions (mm)	Amperage A	Dimensions (mm)	Amperage A
2.5 x 250/350	80-110	4.0 x 350/450	130-180
3.2 x 350	100-140	5.0 x 450	180-220

Approvals and certificates

TÜV (0728.), DB (10.014.32), ABS (E 8018-B2), DNV (NV 1Cr 0.5Mo), GL (13 CrMo 44), LTSS, SEPROZ, CE, NAKS (Ø3.2 mm; Ø4.0 mm)

Similar alloy filler metals

Stick electrode:	FOX DCMS Ti	TIG rod:	DCMS-IG
Solid wire electrode:	DCMS-IG	Flux cored wire:	DCMS Ti-FD
Gas welding rod:	DCMS	Wire/flux combination:	EMS 2 CrMo with BB 24, BB 24 SC, BB 418 TT