

ED-SG CrMo1 MIG (GMAW) wires for creep resisting steels

Classification DIN EN ISO

21952-A G CrMo1Si

Material No.

1.7339

Classification AWS

A5.28 ER80S-G

Approvals

TÜV 04292, CE, DB 42.045.12

Characteristics and application

MIG/GMAW wire for high temperature creep resistant 1.25%Cr-0.5%Mo ferritic steels, i.e. P11/P12. These steels are used for creep resisting applications up to ~550°C. Typical applications in power generation plant include steam piping, turbines and boilers; the alloy also finds applications in the chemical and petro-chemical industries. The wire has low levels of tramp elements (eg. Sn, As, Sb and P) providing a low Bruscato Factor ($X < 10$ ppm) for temper embrittlement resistant applications.

Base materials

For matching 1.25%Cr-0.5%Mo creep resisting ferritic steels.

13CrMo 4-4, 13CrMo 4-5, 16CrMo 4-4, G-17CrMo 5-5

ASTM: A182 grades F11/F12, A199/A200 grade T11, A217 grades WC6/WC11, A234 grades WP11/WP12, A335 grades P11/P12, A387 grades 11/12

Typical analysis in %

C: 0,10

Si: 0,60

Mn: 1,00

Cr: 1,20

Mo: 0,52

Yield strength in Mpa

≥ 355

Tensile strength in Mpa

≥ 510

Elongation in %

4d/5d: ≥ 20

Charpy-V-Value (ISO-V) in J

RT ≥ 100

-10°C ≥ 47

Typical heat treatment

Preheat temperature: 200°C

Interpass temperature: max. 300°C

PWHT: 620°C - 690°C

Other products

SAW: UP-100 CrMo1

MIG/GMAW: ED-ER80S-B2, ED-ER70S-B2L

TIG/GTAW: WSG CrMo1, WSG ER80S-B2, WSG ER70S-B2L

Gas welding: U 49 CrMo (G V)