

ED-SG CrMo2 MIG (GMAW) wires for creep resisting steels

FLIESS
SINCE 1915

Classification DIN EN ISO

21952-A G CrMo2Si

Material No.

1.7384

Classification AWS

A5.28 ER90S-B3Si, A5.28 ER90S-G

Approvals

TÜV 10966, CE, DB 42.045.20

Characteristics and application

MIG/GMAW wire for high temperature creep resistant 2.25%Cr-1%Mo ferritic steels, i.e. P21/P22. These steels are used for creep resisting applications up to ~600°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 2.5%Cr-1%Mo creep resisting ferritic steels.

10CrMo 9-10, G-17CrMo 9-10

ASTM: A182 grade F22, A199/A200 grades T21/T22, A213 grade T22, A217 grade WC9, A234 grade WP22, A335 grade P22, A387 grades 21/22

Typical analysis in %

C: 0,08

Si: 0,60

Mn: 0,92

Cr: 2,45

Mo: 1,00

Yield strength in Mpa

≥ 400

Tensile strength in Mpa

≥ 520

Elongation in %

4d/5d: ≥ 20

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

RT ≥ 80

Typical heat treatment

Preheat temperature: 200°C

Interpass temperature: max. 300°C

PWHT: 690°C

Other products

SAW: UP-99 CrMo2 (S1CrMo2)

MIG/GMAW: ED-ER90S-B3, ED-ER80S-B3L

TIG/GTAW: WSG CrMo2, WSG ER90S-B3

Gas welding: U 50 CrMo (G VI)