BÖHLER CM 2-IG

Solid Wire, low-alloyed, creep resistant

Classifications

EN ISO 21952-A	AWS A5.28 / SFA-5.28
G CrMo2Si	ER90S-G

Characteristics and typical fields of application

Solid wire of type G CrMo2Si / ER90S-G for 2.25 % Cr 1 % Mo alloyed boiler, plate and tube steels as well as in oil refineries e.g. in crack plants. Preferably used for the base material 10CrMo9-10 (ASTM A335 Gr. P22).
Approved in long-term service up to 600 ºC. Also for similar alloyed quenched and tempered steels and case hardening steels.
Creep rupture strength is within the scatter band of 10CrMo9-10.

Base materials

Creep resistant steels and similar alloyed cast steels
Similar alloyed QT-steels up to 980 MPa tensile strength
Similar alloyed case hardening steels, nitriding steels
1.7380 – 10CrMo9-10, 1.7276 – 10CrMo11, 1.7281 – 16CrMo9-3, 1.7383 – 11CrMo9-10,
1.7379 – G17CrMo9-10, 1.7382 – G19CrMo9-10
ASTM A 182 Gr. F22; A 213 Gr. T22; A 234 Gr. WP22; A 335 Gr. P22; A 336 Gr. F22; A 426 Gr. CP22

Typical analysis

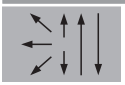
	C	Si	Mn	Cr	Mo
wt.-%	0.08	0.6	0.95	2.6	1.0

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
s	440 (≥ 400)	580 (≥ 550)	22 (≥ 18)	170 (≥ 47)

s heat treated, annealed, 720°C/h / furnace down to 300°C / air – shielding gas Ar + 18 % CO_2

Operating data



Polarity	DC +
Shielding gas (EN ISO 14175)	M1 M2 M3 C

Dimension mm
0.8
1.0
1.2
1.6

Preheating, interpass temperature, and post-weld heat treatment as required by the base metal. Preheating can normally be recommended being in a range of 150 to 350ºC depending on the wall thickness. Common post weld heat treatments are carried out between 650 and 750ºC.

Approvals

TÜV (01085), DB (42.132.70), CE