BÖHLER FOX FF-A

Covered electrode, high-alloyed, austenitic stainless, heat resistant

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 22 12 R 3 2	E309-17

Characteristics and typical fields of application

Rutile core wire alloyed electrode of E 22 12 R / E309-17 type for welding heat resistant rolled, forged and cast steels as well as heat resistant ferritic CrSiAl steels, e.g. in annealing plants, hardening plants, steam boiler construction, the crude oil industry and the ceramics industry. For weld joints in CrSiAl steels exposed to sulphurous gases, the final layer has deposited by means of FOX FA. Scaling resistant up to 950ºC. Smooth beads and easy slag removal.

Atmosphere	Max. application temperature in ºC		
	Sulfur-free	Max. 2 g S/Nm³	> 2 g S/Nm³
Air and oxidizing combustion gases	950	930	850
Reducing combustion gases	900	850	

Base materials

1.4710 GX30CrSi6, 1.4713 X10CrAl7, 1.4724 X10CrAl13, 1.4742 X10CrAl18, 1.4740 GX40CrSi17,
1.4828 X15CrNiSi20-12, 1.4826 GX40CrNiSi22-9, 1.4833 X7CrNi23-14
AISI 305, 309, 405,
UNS S40500, S30900, ASTM A297 HF

Typical analysis

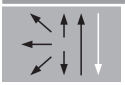
	C	Si	Mn	Cr	Ni
wt.-%	0.1	0.8	0.9	22.5	12.5

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
u	460 (≥ 350)	590 (≥ 550)	37 (≥ 25)	50 (≥ 32)

u untreated, as welded

Operating data



Polarity	DC+ / AC
Electrode identification	FOX FF-A E 22 12 R

Dimension mm	Current A
2.5 × 350	50 – 80
3.2 × 350	80 – 110
4.0 × 350	110 – 140

Preheating and interpass temperatures for ferritic steels 200 – 300ºC.
Suggested heat input max. 1.5 kJ/mm.
Re-drying if necessary at 250 – 300ºC for min. 2 h.

Approvals

TÜV (01315), ABS (309-17), CE