BÖHLER FOX CN 13/1

Covered electrode, high-alloyed, soft-martensitic stainless

Classifications

EN ISO 3581-A

E Z 13 1 B 6 2

Characteristics and typical fields of application

Basic coated electrode of E Z 13 1 B type for welding similar corrosion resistant, martensitic and martensitic-ferritic rolled, forged and cast steels. Improved ductility by alloying with nickel. Corrosion resistance similar to matching 13Cr(Ni)-steels. Excellent slag detachability and smooth bead appearance. Can be used for welding in all positions except vertical-down.

Base materials

1.4000 X6Cr13, 1.4002 X6CrAl13, 1.4006 X12Cr13, 1.4024 X15Cr13
AISI 403, 405, 410, 420

Typical analysis

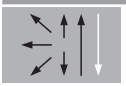
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.04	0.25	0.65	11.5	1.5	0.2

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	Hardness
	MPa	MPa	%	20°C	HV_{10}
u	580 (≥ 500)	670 (630 – 780)	23 (≥ 18)	110	320 – 340
a	540 (≥ 500)	730 (680 – 830)	20 (≥ 15)	65	
a1	760 (≥ 700)	990 (950 – 1110)	8 (≥ 6)	36	

u untreated, as-welded
a annealed, 700°C for 2 h / cooling in air
a1 quenched + tempered, 950°C for 0.5 h / cooling in air + 700°C for 2 h / cooling in air

Operating data



Polarity	DC+
Electrode identification	FOX CN 13/1 E Z 13 1 B

Dimension mm	Current A
3.2 × 450	90 – 120
4.0 × 450	110 – 160
5.0 × 450	160 – 220

Suggested preheating 150 – 200ºC and interpass temperature 180 – 260ºC.
Post-weld heat treatment at 650 – 750ºC.
Metal recovery approximately 130%.
Re-drying at 300 – 350ºC if necessary.

Approvals

CE