BÖHLER FOX A 7-A

Covered electrode, high-alloyed, austenitic stainless, special applications

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E Z 18 9 MnMo R 3 2	E307-16 (mod.)

Characteristics and typical fields of application

Rutile basic coated austenitic electrode of E Z 18 9 MnMo R / E307-16 (mod.) type for welding and cladding in all positions except vertical down. Versatile electrode for numerous applications – welding of "hard-to-weld" steels, dissimilar welding as well as repair and maintenance. For tough buffer and intermediate layers for cladding of rails and switches, valve seats and in hydropower plants.
The weld metal offers exceptionally high ductility and elongation together with outstanding crack resistance. Good resistance to embrittlement when operating at service temperatures up to 650ºC. The weld metal work hardens and offers good resistance to cavitation. The weld metal is resistant to scaling up to 850ºC, but at temperatures above 500ºC there is not sufficient resistance to sulfurous combustion gases. The weld deposit offers high ductility, elongation and resistance to hot cracking, also after high dilution of "hard-to-weld" steels. Designed for first class weld seams and easy handling on AC or DC. Ferrite according to WRC 92 is 4 – 8 FN.

Base materials

Dissimilar joints, tough buffer and intermediate layers prior to hardfacing, 14Mn-steels, 13 – 17% Cr and heat resistant Cr and austenitic steels up to 850ºC, armor plates, high carbon and quenched and tempered steels, surfacing of gears, valves, turbine blades, etc. For welding of unalloyed / low-alloyed or Cr-steels with high-alloyed Cr and CrNi-steels. Welding of austenitic high manganese steels and with other steels.

Typical analysis

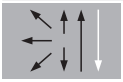
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.10	1.5	4.0	19.5	8.5	0.7

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	–10°C
u	495 (≥ 350)	680 (≥ 500)	38 (≥ 25)	60	50

u untreated, as-welded

Operating data



Polarity	DC+ / AC
Electrode identification	FOX A 7-A / E Z 18 9 MnMo R

Dimension mm	Current A
2.5 × 350	60 – 80
3.2 × 350	80 – 110
4.0 × 350	110 – 140
5.0 × 450	140 – 170

Preheat, interpass temperature and post-weld heat treatment as required by the base metal.
Redrying at 250-300ºC for min. 2 h if necessary.

Approvals

TÜV (02078), DB (30.014.40), CE