BÖHLER FOX CN 23/12 Mo-A

Stick electrode, high-alloyed, stainless, special applications

Classifications

EN ISO 3581-A	AWS A5.4 / SFA-5.4
E 23 12 2 L R 3 2	E309LMo-17

Characteristics and typical fields of application

Rutile electrode of type E 23 12 2 L / 309MoL providing increased delta ferrite contents (FN ~20) in the weld deposit for safe and crack resistant dissimilar joint welds as well as claddings or root passes of clad steel.

BÖHLER FOX CN 23/12 Mo-A is noted for its superior welding characteristics and metallurgy. It can be used on AC and DC. Other advantages include high current carrying capacity, minimum spatter formation, self releasing slag, smooth and clean weld profile, safety against formation of porosity due to the moisture resistant coating and its packaging into hermetically sealed tins.

Operating temperature from –10 °C to 300 °C and for weld surfacing (1st layer) up to 400 °C.

Base materials

Dissimilar joint welds: mild steels and low-alloyed constructional and QT-steels among themselves or among each other; unalloyed as well as low-alloyed boiler or constructional steels with stainless Cr-, CrNi- and CrNiMo-steels; ferritic-austenitic joint welds in boiler and pressure vessel parts.

Weld surfacing: for the first layer of corrosion resistant surfacing on P235G1TH, P255G1TH, S255N, P295GH, S355N - S500N; for the first layer of corrosion resistant weld claddings on high temperature quenched and tempered fine-grained steels acc. AD-Merkblatt HP 0, class 3.

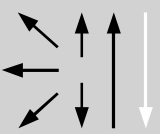## Typical analysis of all-weld metal

	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.02	0.70	0.80	23.00	12.50	2.70

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 work ISO-V KV J	
	MPa	MPa	%	+20 °C	–20 °C
u	**550** (≥ 350)	**700** (≥ 550)	**27** (≥ 25)	**50** (≥ 47)	**40** (≥ 32)

u   untreated, as welded

Operating data

	Polarity: DC (+) AC	Re-drying if necessary: 120 – 200 °C, min. 2 h	Electrode identification: FOX CN 23/12 Mo-A E 23 12 2 L R	ø mm	L mm	Amps A
				2.0	300	45 – 60
				2.5	250/350	60 – 80
				3.2	350	80 – 120
				4.0	350/450	100 – 160
				5.0	450	140 – 220

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (01362.), ABS, RINA, DNV GL, BV, LR, NAKS, CE