

Classifications

EN ISO 3581-A	EN ISO 3581-B	AWS A5.4 / SFA-5.4
E 17 B 2 2	ES430-15	E430-15

Characteristics and typical fields of application

Basic coated, cored wire alloyed electrode of E 17 B / E430-15 type. Good welding characteristics in all positions except vertical-down. Mainly used for surfacing on sealing faces of gas, water and steam valves to meet stainless and wear resistant overlays. At least two layers build up should remain after machining. Scaling resistance up to 900°C. Weld joints of similar, stainless and heat resistant chromium steels provides a very good ability to polishing. Hydrogen content in the weld deposit < 5 ml/100 g.

Base materials

Surfacing can be performed on all weldable base materials, unalloyed and low-alloyed

Welding of corrosion resistant chromium steels as well as other similar-alloyed steels with C-contents up to 0.20% (repair welding)

1.4001 X7Cr14, 1.4006 X12Cr13, 1.4057 X17CrNi16-2, 1.4000 X6Cr13, 1.4002 X6CrAl13, 1.4016 X6Cr17, 1.4059 X17CrNi16-2, 1.4509 X2CrTiNb18, 1.4510 X3CrTi17, 1.4511 X3CrNb17, 1.4512 X2CrTi12, 1.4520 X2CrTi17, 1.4712 X10CrSi6, 1.4713 X10CrAlSi7, 1.4724 X10CrAlSi13, 1.4742 X10CrAlSi18

AISI 403, 405, 409, 410, 429, 430, 430Cb, 430Ti, 439, 431, 442

UNS S40300, S40500, S40900, S41000, S42900, S43000, S43035, S43036, S43100, S44200

Typical analysis

	C	Si	Mn	Cr
wt.-%	0.08	0.4	0.3	17.0


Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A ($L_0=5d_0$)	Hardness
	MPa	MPa	%	HB
u				250
a	370 (≥ 300)	560 (≥ 450)	23 (≥ 15)	200

u untreated, as-welded

a annealed, 750°C for 2 h / cooling in furnace

Operating data

	Polarity	DC+	Dimension mm	Current A
	Electrode identification	FOX SKWA 430-15 E 17 B	2.5 × 300	60 – 80
			3.2 × 350	80 – 110
			4.0 × 350	110 – 140
			5.0 × 450	140 – 180

The hardness of the deposit is greatly influenced by the degree of dilution with the base metal (depending on the relevant welding conditions) and by its chemical composition. As a general rule it can be observed that the higher the degree of dilution and the C-content of the base metal, the higher the deposit hardness.

Preheating and interpass temperature 200 – 300°C, post-weld heat treatment at 730 – 800°C.

Re-drying if necessary at 120 – 200°C for min. 2 h.

Approvals

KTA 1408.1 (8098.00), CE