OK B3 SC

OK B3 SC is a basic AC/DC electrode designed for welding of creep resistant 2,25% Cr 1% Mo alloyed steels, SA-387 Grade 22, A335 Grade P22 or similar materials when highest toughness values are required also after step cooling treatment. Very low level of impurity elements providing a X-bar max. 10 for temper embrittlement resistant applications. Usually welding is followed by a PWHT. Suitable for refinery, petrochemical and chemical industries, power generation, pressure vessels, etc.

Specifications	
Classifications	SFA/AWS A5.5 : E9018-B3 H4 R EN ISO 3580-A : E CrMo2 B 32 H5
Approvals	CE : EN 13479 NAKS/HAKC : 3.2 mm NAKS/HAKC : 4.0 mm VdTÜV : 19612

Approvals are based on factory location. Please contact ESAB for more information.

Welding Current	DC+-, AC
Diffusible Hydrogen	< 4.0 ml/100g
Alloy Type	Low alloyed (2.25% Cr ; 1% Mo)
Coating Type	Basic covering

Typical Tensile Properties				
Condition	**Conditional Statement**	**Yield Strength**	**Tensile Strength**	**Elongation**
AWS				
3.PWHT 32 hour(s) 690 °C		460 MPa	580 MPa	27 %
4.PWHT (Test	Test Temp. 454°C	370 MPa	455 MPa	18 %
1.PWHT 1 hour(s) 690 °C		550 MPa	650 MPa	23 %
2.PWHT 4 hour(s) 690 °C		540 MPa	650 MPa	25 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
AWS		
2.PWHT	-30 °C	150 J
1.PWHT	-30 °C	120 J
3.PWHT	-30 °C	140 J

Typical Weld Metal Analysis %									
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**	**Mo**	**V**	**Al**
0.085	0.7	0.20	0.004	0.005	0.04	2.35	1	0.007	0.002

Typical Weld Metal Analysis %									
Cu	**Nb**	**Ti**	**Sb**	**As**	**B**	**Sn**	**Mn+Si**	**Nb+Ti+V**	**P+Sn**
0.04	0.004	0.007	0.001	0.002	0.0002	0.004	0.9	0.018	0.009

Typical Weld Metal Analysis %		
PE	**J-Factor**	**X-bar**
2.7	85	7

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Deposition Data					
Diameter	**Current**	**Voltage**	**Deposition Efficiency (%)**	**Fusion time per electrode at 90% I max**	**Deposition Rate @ 90% I max**
2.5 x 350.0 mm	60-95 A	23 V	60 %	63 sec	0.8 kg/h
3.2 x 350.0 mm	75-145 A	23 V	60 %	62 sec	1.2 kg/h
4.0 x 450.0 mm	100-200 A	26 V	58 %	86 sec	1.7 kg/h
5.0 x 450.0 mm	115-260 A	25 V	63 %	106 sec	2.3 kg/h