OK Autrod 312

A continous solid corrosion resisting chromium-nickel wire for welding of stainless steels of the 29% Cr, 9% Ni types. OK Autrod 312 has a good oxidation resistance at high temperatures due to its high content of Cr. The alloy is widely used for joining dissimilar steels especially if one of the component is fully austenitic and steels that are difficult to weld, i e machine components, tools, austenitic manganese steels.

Specifications	
Classifications	EN ISO 14343-A : G 29 9 SFA/AWS A5.9 : ER312

Alloy Type	Ferritic-austenitic (29 % Cr - 9 % Ni)
Shielding Gas	M12, M13 (EN ISO 14175)

Typical Tensile Properties			
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
As Welded	610 MPa (88 ksi)	770 MPa (112 ksi)	20 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
As Welded	20 °C (68 °F)	50 J (37 ft-lb)

Typical Wire Composition %						
C	**Mn**	**Si**	**Ni**	**Cr**	**Mo**	**Cu**
0.10	1.6	0.4	8.8	30.7	0.20	0.14

Typical Weld Metal Analysis %						
C	**Mn**	**Si**	**S**	**P**	**Ni**	**Cr**
0.1	1.7	0.5	0.010	0.020	9	29

Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
1.0 mm (0.040 in.)	80-190 A	16-24 V	2.9-8.4 m/min (114-331 in./min)	1.1-3.1 kg/h (2.4-6.8 lbs/h)
1.2 mm (0.047 in.)	180-280 A	20-28 V	4.9-8.5 m/min (193-335 in./min)	2.6-4.5 kg/h (5.7-9.9 lbs/h)