

Dual Shield 7000-A1

Dual Shield 7000-A1 is an all-position flux cored electrode recommended for 0.5% Mo steels. It is used in the fabrication and erection of boilers, pressure piping and tubing and other pressure vessel applications. Shielding gas of 100% CO₂ and 75% Ar, remainder CO₂ may be used. The weld metal analysis is similar to an E7018-A1 low hydrogen electrode.

Specifications

Classifications

ASME SFA 5.36
AWS A5.36 : E81T1-C1PZ-A1
AWS A5.36 : E81T1-C1AZ-A1
ASME SFA 5.29
AWS A5.29 : E81T1-A1C/A1M

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
Stress Relieved 1 hour(s) 620 °C (1150 °F)	566 MPa (82 ksi)	645 MPa (93 ksi)	26 %
As Welded	566 MPa (82 ksi)	635 MPa (92 ksi)	22 %

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Mo
0.05	0.90	0.60	0.01	0.01	0.55

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	TTW Dist.	Deposition Rate
100% CO₂						
1.6 mm (1/16 in.)	352 A	27 V	889 cm/min (350 in./min)	88.1 %	19 mm (3/4 in.)	6.0 kg/h (13.1 lbs/h)
1.4 mm (.052 in.)	150 A	23.5 V	381 cm/min (150 in./min)	75.8 %	19 mm (3/4 in.)	1.6 kg/h (3.6 lbs/h)
1.6 mm (1/16 in.)	195 A	24 V	381 cm/min (150 in./min)	85 %	19 mm (3/4 in.)	2.5 kg/h (5.5 lbs/h)
1.6 mm (1/16 in.)	382 A	28.5 V	1016 cm/min (400 in./min)	86.8 %	19 mm (3/4 in.)	6.7 kg/h (14.7 lbs/h)
1.2 mm (.045 in.)	275 A	28.5 V	1270 cm/min (500 in./min)	83.1 %	19 mm (3/4 in.)	4.4 kg/h (9.6 lbs/h)
1.4 mm (.052 in.)	250 A	25.5 V	762 cm/min (300 in./min)	81.7 %	19 mm (3/4 in.)	3.5 kg/h (7.7 lbs/h)
1.2 mm (.045 in.)	230 A	27 V	1016 cm/min (400 in./min)	81.8 %	19 mm (3/4 in.)	3.3 kg/h (7.4 lbs/h)
1.6 mm (1/16 in.)	325 A	26.5 V	762 cm/min (300 in./min)	85.9 %	19 mm (3/4 in.)	4.9 kg/h (10.9 lbs/h)
1.4 mm (.052 in.)	190 A	24 V	508 cm/min (200 in./min)	77.8 %	19 mm (3/4 in.)	2.2 kg/h (4.9 lbs/h)
1.2 mm (.045 in.)	140 A	24 V	508 cm/min (200 in./min)	77.8 %	15.9 mm (5/8 in.)	1.7 kg/h (3.6 lbs/h)
1.6 mm (1/16 in.)	290 A	25.5 V	635 cm/min (250 in./min)	86.5 %	19 mm (3/4 in.)	4.2 kg/h (9.2 lbs/h)
1.4 mm (.052 in.)	300 A	27 V	1016 cm/min (400 in./min)	82.5 %	19 mm (3/4 in.)	4.7 kg/h (10.3 lbs/h)
1.2 mm (.045 in.)	192 A	25.5 V	762 cm/min (300 in./min)	79.3 %	15.9 mm (5/8 in.)	2.5 kg/h (5.5 lbs/h)
1.4 mm (.052 in.)	345 A	28.5 V	1270 cm/min (500 in./min)	84.7 %	19 mm (3/4 in.)	6.0 kg/h (13.3 lbs/h)