

Dual Shield II 4130 SR

Dual Shield II 4130 SR is an all position flux cored wire for welding low alloy, high strength steels such as 4130. Ideal for offshore oil and gas topsides and platforms requiring high corrosion resistance with stress relieved high strength and low temperature impact toughness properties. Excellent welder appeal and mechanical properties after PWHT. Meets ANSI/NACE MR0175/ISO 15156-1. Typical Diffusible Hydrogen: <4 ml/100g of deposited metal.

Specifications

Classifications

AWS A5.29/A5.29M, ASME SFA 5.29 : E101T1-GM
AWS A5.36/A5.36M : E101T1-M21AP5-G-H4

Typical Tensile Properties

Condition	Yield Strength	Tensile Strength	Elongation
Stress Relieved 2 hour(s) 620 °C (1150 °F)	648 MPa (94 ksi)	731 MPa (106 ksi)	26 %

Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
Stress Relieved	-46 °C (-50 °F)	43 J (32 ft-lb)
As Welded	-46 °C (-50 °F)	64 J (47 ft-lb)
Stress Relieved	-46 °C (-50 °F)	69 J (51 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo
0.05	2.0	0.3	0.006	0.011	0.90	0.03	0.43

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	TTW Dist.
1.2 mm (.045 in.)	150-170 A	23-24 V	4,32 m/min (170 in./min)	19 mm (3/4 in.)
1.2 mm (.045 in.)	180-220 A	24-26 V	7,19 m/min (283 in./min)	16 mm (5/8 in.)
1.2 mm (.045 in.)	230-280 A	26-28 V	10,16 m/min (400 in./min)	16 mm (5/8 in.)

Recommended Welding Parameters

Current	Wire Diameter	TTW Dist.	Voltage	Wire Feed Speed
150-170 A	1.2 mm (.045 in.)	19 mm (3/4 in.)	23-24 V	432 cm/min (170 in./min)
180-220 A	1.2 mm (.045 in.)	16 mm (5/8 in.)	24-26 V	719 cm/min (283 in./min)
230-280 A	1.2 mm (.045 in.)	16 mm (5/8 in.)	26-28 V	1016 cm/min (400 in./min)