

SC-81Ni2

Type : Rutile

Conformances

AWS A5.36/ ASME SFA5.36 E81T1-C1A8-Ni2

(AWS A5.29/ ASME SFA5.29 E81T1-Ni2C)

JIS Z3313 T55 6 T1-1 C A-N5 H5

EN ISO 17632-A-T 46 6 2Ni P C1 1 H5

KR 5Y46SG(C1) H5

ABS 5YQ460SA H5

LR 4Y47S H5

BV SA5Y46 HHH

DNV-GL VY46MS(H5)

NK KSW63Y47G(C)H5

CWB CSA W48 E551T1-C1A6-Ni2
(E81T1-C1A8-Ni2)

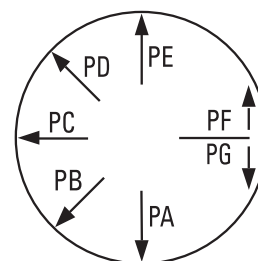
Applications

- Shipbuilding
- Offshore structure
- Structural fabrication

Features

- Good impact value at low temperature
- Good CTOD value

Welding Position



Current

DC +

Shielding Gas

100% CO₂

Diameter / Packaging

Diameter	Spool			Pac		
	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)	100kg (221lbs)	200kg (441lbs)	250kg (551lbs)
mm (in)						
1.2 (0.045)	√				√	
1.4 (0.052)	√				√	

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Ni
0.05	0.27	1.21	0.010	0.010	2.20

Typical Mechanical Properties of All-Weld Metal

YS MPa(lbs/in ²)	TS MPa(lbs/in ²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft.lbs)
590 (85,600)	630 (91,400)	25.0	-40 (-40) -60 (-76)	100 (74) 80 (59)

Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm (in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)	Efficiency (%)			
1.2mm (0.045 in) DC+									
100% CO ₂	25 (1)	All Position				86-88			
		4.4 (175)	110~140	23~28	1.6 (3.5)				
		5.1 (200)	120~150	24~29	1.8 (4.0)				
		6.4 (250)	130~160	25~30	2.3 (5.0)				
		7.6 (300)	160~190	25~30	2.7 (6.0)				
		8.9 (350)	170~210	26~31	3.2 (7.0)				
		9.5 (375)	190~230	26~31	3.4 (7.5)				
		10.8 (425)	220~250	27~32	3.8 (8.5)				
		Flat & Horizontal							
		12.1 (475)	240~270	28~33	4.9 (10.8)				
		12.7 (500)	250~280	29~34	5.2 (11.4)				
		1.4mm (0.052 in) DC+							
		100% CO ₂	25 (1)	All Position				86-88	
3.8 (150)	120~150			23~28	1.8 (3.9)				
4.7 (180)	130~160			24~29	2.2 (4.8)				
5.7 (225)	160~190			24~29	2.7 (5.9)				
6.4 (250)	190~220			25~30	2.9 (6.5)				
6.9 (275)	200~230			25~30	3.2 (7.2)				
7.6 (300)	220~250			26~31	3.5 (7.8)				
Flat & Horizontal									
8.5 (335)	240~270			26~31	4.0 (8.7)				
9.5 (375)	260~290			27~32	4.4 (9.8)				
10.2 (400)	280~310			27~34	4.7 (10.4)				