

ROYALFIL GS 81 RM (E81T1-B1 C)

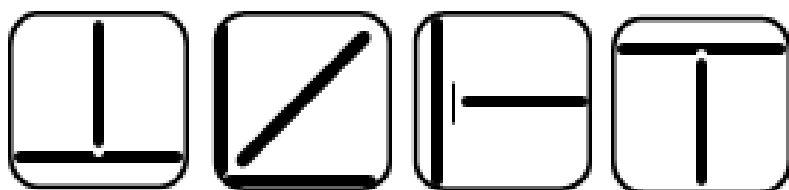
AWS A /SFA 5.29 E81T1-B1 C

Applications

RoyalFil GS- 81R-M is Suitable for single & multiple pass welding using DCEP polarity. It is used for welding of similar composition of Cr-MO steels & other creep resistant steels with CO₂ shielding. Commonly used in steam power plants, ships, chemical plants & refineries.

Characteristics on Usage

RoyalFil GS- 81R-M is an all position rutile based low alloy steel wire depositing Approx 0.5%Cr & 0.5%Mo weld metal. It is characterized by spray transfer, less spatter, smooth & stable arc with good penetration & moderate volume of slag which completely covers the weld bead. Weld metal is of radiographic quality.

Welding Positions

1G

2F

3G

4G

Chemical Composition Of Weld Metal

Element	C%	Mn%	Si%	S%	P%	Cr %	Mo
Typical Values	0.060	0.70	0.60	0.010	0.018	0.50	0.5
Spec. Req'd.	0.05-0.12	1.25 Max	0.80 Max	0.030 Max	0.030 Max	0.4 -0.65	0.4 -0.5

Mechanical Properties Of Weld Metal

(After PWHT at 690 ± 15°C for 1 Hr)

Property	U.T.S. (N/mm ²)	Y.S. (N/mm ²)	ELONGATION (L = 4d) %
Typical Values	610	520	24
Spec. Req'd.	550 - 690	470 Min	19 Min

Welding Parameters (DC + VE)

Diameter (mm)	Flat & Horizontal	Flat & Horizontal	Vertical - Up	Vertical - Up	Overhead	Overhead
	(A)	(V)	(A)	(V)	(A)	(V)
1.20	180-250	26-30	120-210	22-26	150-200	26-30
1.60	210-280	26-30	160-250	22-27	190-240	26-30

Packing

15 kgs. vacuum packed plastic spool.