

Applications

Royalfil GS- 90 D2 is designed for welding of high strength, low alloy pressure vessels steel is such as A302 Gr. B, HSLA steels and Manganese- Molybdenum castings, such as ASTM A 49, A 291 and A 735 etc. to meet low temperature toughness as well as down to – 50 °C.

Characteristics on Usage

Royalfil GS-90 D2 is low alloy basic flux cored wire depositing 2.0 % Mn, 0.4 % Mo weld metal with CO₂ shielding. The weld deposit is of radiographic quality with very low diffusible hydrogen and stable and smooth arc with good slag detachability. However, the weld metal from these Mn-Mo steel electrodes is quite air-hardenable and usually requires preheat and PWHT.

Welding Positions

1G 2F

Recommended Stick Out

15 - 20 mm

Shielding GasCarbon Dioxide (CO₂) shielding
Gas Flow :20-25 Lit / Min**Chemical Composition Of Weld Metal**

Element	C%	Mn%	Si%	S%	P%	Mo %
Typical Values	0.045	2.0	0.50	0.01	0.018	0.40
Spec. Reqd.	0.15 Max	1.65-2.25	0.80 Max	0.03 Max	0.03 Max	0.25-0.55

Mechanical Properties Of Weld Metal

(After PWHT at 620 ± 15°C for 1 Hr)

Property	U.T.S. (N/mm ²)	Y.S. (N/mm ²)	ELONGATION (L = 4d) %	IMPACT (CVN) AT – 50 ° C (J)
Typical Values	700	610	22	50
Spec. Reqd.	620-760	540 Min	17 Min	27 Min

Welding Parameters (DC + VE)

Diameter (mm)	Flat & Horizontal	
	(A)	(V)
1.20	180-210	26-30
1.60	210-250	26-30

Packing

15 kgs. vaccum packed plastic spool.