ROYALFIL GS 209 (E2209T0-1)

Applications

Royalfil-GS 209 used for welding of Duplex stainless steel which contain approximately 22% Chromium. Also used for joining of Duplex steels to mild steels, cladding of Duplex stainless steel weld metal on Carbon steel/low alloy steel. Used for piping in gas & oil industry, off-shore platforms, welding of duplex stainless steels 1.4417, 1.4460, 1.4462

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Characteristics on Usage

Royalfil GS- 209 is a Duplex stainless steel flux core welding wire for welding with Co2 shielding gas. The nominal composition of the weld metal is 22 % Cr., 9 % Ni., 3 % Moly., & 0.15 % N. The microstructure of the weld deposit consists of a mixture of Austenite & Ferrite. Because of the two phase microstructure, this alloy is one of the family of duplex stainless steel alloys. The alloy has high tensile strength & has good resistance to stress corrosion cracking & pitting corrosion Welding of Duplex steels should be made with low heat input. Weld metal is of radiographic quality.



Chemical Composition Of Weld Metal

Element	C%	Mn%	Si%	S%	P%	Cr %	Ni
Typical Values	0.030	1.50	0.50	0.006	0.030	22.5	9.0
Spec. Reqd.	0.04 Max	0.5-2.0	1.0 Max	0.03 Max	0.04 Max	21-24	7.5

Mechanical Properties Of Weld Metal

Property	U.T.S.	ELONGATION	
	(N/mm²)	(L = 4d) %	
Typical Values	780	25	
Spec. Reqd.	690 Min	20 Min	

Welding Parameters (DC + VE)

Diameter	Flat & Horizontal	Flat & Horizontal	
(mm)	(A)	(V)	
1.20	160-210	26-30	
1.60	190-250	26-30	

Packing

12.5 kgs. vacuum packed plastic spool.

Welding Positions