



MODI-7018 (SPECIAL)

LOW HYDROGEN ELECTRODE

CLASSIFICATION :

IS : 814-2004 : EB 5426 H₃JX
AWS/A 5.1 : E 7018 - 1

APPROVALS :

PDIL, CIB(UP), DNV, DCE, NPC, UHDE, DESEIN

CHARACTERISTICS :

A low hydrogen iron powder electrode, producing exceptionally tough and ductile welds. Weld metals are of radiographic quality. Deposition efficiency is approximately 115%. The weld deposit shows an exceptionally high impact strength at room temperature as well as down to minus 46°C. Typical hydrogen content in weld metal is 4 ml/100gms.

APPLICATIONS :

- * Hardenable low alloy steel
- * Heavy & rigid structures
- * Pressure Vessels
- * Equipment subjected to high stress and dynamic loading
- * Equipments require heavy impact at minus 46°C.

RECOMMENDATIONS :

Re-dry the electrodes at 350°C for one hour or at 250°C for two hours. Keep the re-dried electrodes in a holding oven at a temperature of 70°C-100°C. Use the electrodes directly from holding oven. Prevent excessive heat input to get good impact strength. Use stringer bead technique with maximum number of layers & control interpass temperature.

CHEMICAL ANALYSIS OF WELD-METAL(%) :

C	Mn	Si	S	P
0.10 max	1.3-1.6	0.60 max	0.03 max	0.03 max

MECHANICAL PROPERTIES OF ALL WELD-METAL (AS PER AWS/A 5.5) :

Yield Strength	Ultimate Tensile Strength	Elongation (GL=4d)	Reduction in Area	CVN Impact Values at minus 46°C
Kg/mm ²	Kg/mm ²	(%)	(%)	Joules
46-52	55-66	26 min	55 min	30 min
N/mm ²	N/mm ²			
450-510	540-650			

CURRENT CONDITIONS : USE AC OR DC (+) ONLY

Size (mm)	2.5x350	3.15x450	4.0x450	5.0x450	6.3x450
Amps	70-100	100-140	140-180	180-240	240-280

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