



## Low Hydrogen Electrodes for Mild & Medium Tensile Steel ALPHA 7018

### Characteristics:

**Alpha 7018** is heavy coated, low hydrogen, iron powder type electrode producing a tough & ductile weld metal for welding heavy joints under restraint and joints subject to dynamic loading. The weld metal is of radiography quality and easy operates in all positions. Deposit efficiency is 110% approx.

### Applications

Structural steels, Low alloy steels, Low temperature steels, High carbon steels, Rails, Wagons, Bridges, Boilers, Pressure vessels, Tanks, Ship-building, Cranes, Machine building etc. involving joining of dissimilar steels and welding of heavy mild steel sections. Specially recommended for heavy joints under restraint and subject to dynamic loading.

### Typical Weld metal Composition

Element	Percent
C	0.063
Si	0.30
Mn	1.10
S	0.019
P	0.020

### Typical Mechanical Properties of all weld Metal

Ultimate Tensile Strength N/mm <sup>2</sup>	Yield Strength N/mm <sup>2</sup>	Elongation % (L=5d)	CVN Impact Values at -30°C. J
590	480	26	70 J

**Weld Metal Hydrogen Contents: - < 4.0 ml/100 gram of weld metal deposit.**

### Classifications:

<b>AWS/ A5.1:</b>	E 7018
<b>IS: 814</b>	EB 5426 H 3 JX
<b>DIN 1913:</b>	E 5144 B 1026
<b>BS 639:</b>	E 42 3B 32 (H5)

### Current Range & Packing Data :

Size MM DxL	Current Range (Amps) AC(70V) or DC (+)	Pieces per Packet	Pieces per Carton
5.00x450	190-240	40	160
4.00x450	140-190	70	280
3.15x450	100-140	100	400
2.50x350	70-100	150	600

**Welding Instructions:-** Re-Dry the electrode at t 250<sup>o</sup> C to 300<sup>o</sup> C for 02 hrs .

**Approvals:** *BHEL, NTPC & IBR (Director of Boilers Uttar Pradesh)*

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