AWS A5.1 E7018-1 EN ISO 2560-B-E4918-1A

# **Characteristics and Applications:**

HOBART 18-1 is an iron powder type of low hydrogen electrode for all-position welding of 490N/mm<sup>2</sup> grade high tensile steel. It performs with higher deposition rate, good X-ray soundness, good mechanical properties and beautiful bead appearance. With excellent notch toughness at the temperature of -40°C to -50°C, it is very suitable for low alloy steels, medium carbon steels, heavy steel plates, cast steels and especially for welding of Aluminum Killed steel of LPG.

### Notes on Usage:

- 1. Dry the electrodes at 300-350  $^\circ$ C for 60 minutes and then keep at 100-150  $^\circ$ C before using.
- 2. Use back-step method and hold for 3-5 seconds at every end-up to prevent arc starting from blowholes.
- 3. Maintaining short arc length as possible is highly recommended. While welding with weave method, moving range should be controlled within 3 times of the wire's dia.
- 4. Clean up the contaminations on the base metal.

## Typical Chemical Composition of Weld Metal (wt%)

	С	Mn	Si	Р	S	Ni	Cr	Мо	V
AWS	≦0.15	≦1.60	≦0.75	≦0.035	$\leq$ 0.035	≦0.30	≦0.20	≦0.30	≦0.08
EN ISO	≦0.15	≦1.60	≦0.75	≦0.035	$\leq$ 0.035	≦0.30	≦0.20	≦0.30	≦0.08
Typical value	0.08	1.30	0.50	0.02	0.008	0.009	0.02	0.002	0.014

## **Typical Mechanical Properties of Weld Metal**

	Yield Strength MPa(ksi)	Tensile Strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -45°C (-50°F)
AWS	<b>≧400(58)</b>	<b>≧490(70)</b>	≧22	≧27(20)
EN ISO	<b>≧400(58)</b>	<b>≧490(70)</b>	≧20	<b>≧27(20)</b>
Typical value	500(73)	580(84)	30	100(77)

## Welding Position:



## Sizes and Recommended Operating Range (AC or DC < +>)

Diameter (mm)		2.6	3.2	4.0	5.0	
Length (mm)		350	350	450	450	
Current	F	55-85	90-130	130-180	170-240	
(Amps)	V&OH	50-80	80-120	110-160	150-180	

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