# **TLH-581R**

AWS A5.1 E7018-1 H4R EN ISO 2560-A-E 46 4 B 1 2 H5 JIS Z 3211 E4918-1 H5

#### **Characteristics and Applications:**

TLH-581R is an iron powder low hydrogen type electrode for all-positioned welding of 490N/mm² grade high tensile steel. The welding provides high deposition rate, good X-ray soundness, good mechanical properties, excellent moisture absorbency resistance and smooth bead appearance. Because of excellent notch toughness at the temperature of -45°C, it is very suitable for low alloy structure, medium carbon steels, barge offshore rigs and shipbuilding.

#### Notes on usage:

- 1. Take the backstep method to prevent blowholes at the arc starting.
- 2.Keep the arc as short as possible.
- 3.Be sure to clean up the base metal surface from all contamination.
- 4.If electrode has been exposed to the atmosphere over 8 hours, it must be rebaked at 400℃ for one hour.

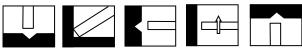
#### Typical chemical composition of weld metal (wt%):

С	Mn	Si	Р	S
0.065	1.40	0.50	0.020	0.007

#### Typical mechanical properties of weld metal:

Yield strength MPa(ksi)	Tensile strength MPa(ksi)	Elongation %	Charpy V-Notch J (ft-lbf) -46°C (-51°F)
470(68)	540(78)	29	140(103)

### Welding position:



## Sizes and recommended current range (AC or DC<+>):

Diameter (mm)		2.6	3.2	4.	0	5.0
Length	n (mm)	350	350	350	450	450
Amps	F	95-110	120-140	160-	200	200-240
	V&OH	80-100	110-130	130-	·160	

## Typical absorbed moisture (at 27°C/80%RH condition):

0hr	9hrs	24hrs
0.13%	0.13%	0.17%

## Typical diffusible hydrogen (at 27°C/80%RH condition):

0hr(ml/100g)	4hrs(ml/100g)
3.27	3.43

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