TGY 7018

Basic Coated Low Hydrogen Electrode

Classification

AWS A/SFA 5.1 : E7018
EN ISO 2560-A : E 42 3 B 3 2
IS 814 : EB5426H3J-X

Type of Current

AC, DCEP

Description and Applications

- Low hydrogen iron powder type electrode
- Metal recovery of about 115%
- Easy to use in all positions
- Easy slag release
- Radiographic quality weld metal
- Boilers, Pressure Vessels
- Heavy structures
- Ship building , Storage tanks
- Bridges, Pipelines and Penstocks
- Earth moving machinery

Chemical composition for Weld Metal, Weight%

Element	C	Mn	Si	S	P
Typical	0.08	1.2	0.4	0.02	0.02
Requirement (as per AWS A 5.1)	0.15 max	1.60 max	0.75 max	0.035 max	0.035 max

Mechanical properties of Weld Metal (As Welded)

Property	UTS (Mpa)	YS (Mpa)	%El (L=4d)	CVN Impact Strength at -30°C (Joule)
Typical	550	460	28	65
Requirement (as per AWS A 5.1)	490 min	400 min	22 min	27 min
Requirement (as per ISO 2560-A)	500-640	420 min	20 min	47 min
Requirement (as per IS 814)	510-610	360 min	20 min	27 min

Welding Position

Typical	Flat	Flat	Horizontal	Horizontal	Overhead	Overhead	Vertical Up
Requirement (as per AWS A 5.1)	Flat	Flat	Horizontal	Horizontal	Overhead	Overhead	Vertical
Requirement (as per ISO 2560-A)	1F (PA)	1G (PA)	2F (PB)	2G (PC)	4F (PD)	4G (PE)	3G(PF) Vertical Up
Requirement (as per IS 814)	Flat	Flat	Horizontal	Horizontal	Overhead	Overhead	Vertical Up

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Type of Current

Typical	AC	DCEP
Requirement (as per AWS A 5.1)	AC	DCEP
Requirement (as per ISO 2560-A)	AC	DCEP or DCEN
Requirement (as per IS 814)	AC	DCEP

Metal Recovery

Typical	115%
Requirement (as per AWS A 5.1)	Not Specified
Requirement (as per ISO 2560-A)	105% - 125%
Requirement (as per IS 814)	110% - 129%

Diffusible Hydrogen limit for Weld Metal

Property	Diffusible Hydrogen in Weld Metal
Typical	4 ml/100 gram
Requirement (as per IS 814)	5 ml/100 gram max.

Recommended Welding Current Range

Size (mm) Dia x Length	Current Range (Amp)
2.5x350	60-90
3.2x350	100-140
3.2x450	100-140
4.0x450	140-180
5.0x450	190-230

Packing

▶20 Kg box consisting of 4 packets of 5 Kg each.

Identification

Name printed

Notes on Usage

- E7018 electrodes are sensitive to moisture and must be stored in an electrode oven at a temperature 120-150°C to prevent defects like porosity.
- If exposed to the atmosphere for too long, bake electrodes in a electrode oven at 315°C for at least one hour.