KOBELCO
KOBE STEEL GROUP

ECO WAY

Iron powder, low hydrogen type electrode

TRUSTARC™ KOBE-7018-1

AWS A5.1 E7018-1, EN ISO 2560-A-E 42 4 B

General Characteristics

Workability

- Much iron powder contained in the coating gives high efficiency.
- TRUSTARC™ KOBE-7018-1 produces the weld metal of excellent toughness and crack resistibility because of the characteristic peculiar to the low hydrogen type electrode..
- Good weldability and bead appearance with both AC and DC.
- All position welding for 490MPa class high tensile steel is performed, in the field of shipbuilding, pressure vessel, machine and steel structural fabrications.

Production Sizes and Recommended Welding Current

Electrode Diameter (mm)		2.6	3.2	4.0	5.0
Electrode Length (mm)		*350*	*350*	*400*	*450*
Current Range (Amp)	F, HF, H	*70-100*	*90-130*	*130-180*	*180-240*
	VU, OH	*65-95*	*80-120*	*110-170*	-

Chemical composition of all weld metal (mass%)

	C	Si	Mn	P	S	Ni	Cr	Mo	V	1*
Typical (DCEP)	0.06	0.38	1.54	0.011	0.004	0.01	0.03	<0.01	0.01	1.58
Guaranty	≦0.15	≦0.75	≦1.60	≦0.035	≦0.035	≦0.30	≦0.20	≦0.30	≦0.08	≦1.75

Note : *1 = Mn+Ni+Cr+Mo+V

Mechanical properties of all weld metal

	Yield Point, MPa	Tensile Strength, MPa	Elongation, %	Impact value, J		
				-60 ℃	-46 ℃	-30 ℃
As welded	493	563	34	115,163,123 Avg. 134	149,178,191 Avg. 172	177,194,189 Avg. 187
PWHT (620 ℃x4hr)	433	530	39	152,177,185 Avg. 171	211,172,198 Avg. 194	254,267,278 Avg. 266
Guaranty	≧400	≧490	≧22	-	≧27	-

Diffusible hydrogen content

Diffusible hydrogen content (ml/100g)				
2.2	2.7	2.5	3.1	Avg. 2.6

According to AWS A4.3 (Gas chromatography method)
Welding condition : 165A-26V (4.0mm, DCEP)
Re-drying condition : 350℃ x 1hr

Shipping Approval

Approvals list			
LR	ABS	DNV-GL	BV

Notes of Usages

- Dry the electrodes at 350℃~400℃ for 1 hour before use.
- Keep the arc length as short as possible.
- Use the back-step method or a tab plate at the time of arc starting in order to prevent blowholes.
- Use the wind screen against strong wind.
- Do the pre-heating properly when there is fear of cracking at the time of welding high restrained or high carbon equivalent steel.

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