



J506 (J48•56)

Conform to GB/T 5117 E5016
 AWS A5.1 E7016
 ISO 2560-B-E 49 16 A

Instructions: J506 is carbon steel welding rod covered with low hydrogen potassium coating. It can be used under AC and DC and all position welding is possible. It is characterized by good welding performance, stable arc, low spatter and easy slag removal. Its deposited metal has excellent mechanical properties and crack resistance, and its low temperature impact toughness is good.

Purpose: It is used for welding of medium-carbon steel and low alloy steel structures, such as 16Mn, 09Mn2Si and Grades A, B, D and E steel for shipbuilding, as well as welding of thick plates and carbon steel structures with poor weldability.

Chemical composition of deposited metal (%)

Items	C	Mn	Si	S	P	Ni	Cr	Mo	V
Guarantee value	≤ 0.15	≤ 1.60	≤ 0.75	≤ 0.035	≤ 0.035	≤ 0.30	≤ 0.20	≤ 0.30	≤ 0.08
Measured value	0.080	1.05	0.51	0.012	0.020	0.012	0.030	0.007	0.016

Mechanical properties of deposited metal (shielding gas: CO₂)

Test Items	R _m (MPa)	R _{eL} (MPa)	A(%)	KV ₂ (J)	
				-20°C	-30°C
Guarantee value	≥ 490	≥ 400	≥ 20	≥ 47	≥ 27
Measured value	545	440	32	175	169

X-ray radiographic inspection requirements: Level I

Reference current (AC.DC⁺)

Welding wire diameter (mm)	Φ2.5	Φ3.2	Φ4.0	Φ5.0
Welding Current (A)	60 ~ 100	80 ~ 140	110 ~ 210	160 ~ 230

Precautions:

1. Welding rods must be baked at 350°C for 1h before welding and they shall be baked immediately before use.
2. The rust, oil stain, water and other impurities of the weldment must be removed before welding.
3. Short arc operation is required for welding and string bead is preferred.

Welding position:

