THJ506 (E7016)

CARBON STEEL WELDING ELECTRODE

AWS A5.1 E7016
ISO 2560-B-E4916 A
GB/T 5117 E5016

APPLICATION

Welding 490 MPa class medium-carbon and low-alloy steel components, including Q355, 09Mn2Si, and 16Mn.

CHARACTERISTICS

THJ506 is a low-hydrogen potassium-type electrode with a basic coating, suitable for all-position welding with AC or DCEP. It offers good welding operability, and the deposited weld metal has good mechanical properties and crack resistance.

PRECAUTIONS

Re-dry the electrodes at 350-380 °C for 1 hour before welding and use promptly after re-drying. Remove rust, oil, moisture, and other contaminants from the workpiece before welding. Use a short arc, limit weaving, and preferably use narrow stringer beads. To prevent porosity at arc starts, use a run-on tab or strike the arc ahead of the start point and return to it before proceeding.

WELDING POSITIONS



MECHANICAL PROPERTIES

Items	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	Impact energy at -30 °C (J)
Requirements	490-660	≥400	≥22	≥80
Typical results	590	510	30	160

DEPOSITED WELD METAL CHEMICAL COMPOSITION (%)

Items	C	Mn	Si	S	P	Ni	Cr	Mo	V
Requirements	≤0.10	0.85-1.40	≤0.65	≤0.030	≤0.035	≤0.30	≤0.20	≤0.30	≤0.08
Typical results	0.07	1.10	0.35	0.012	0.018	0.030	0.035	0.005	0.004

TYPICAL OPERATING PROCEDURES

AC / DCEP

Diameter × length (mm)	2.0 × 300	2.5 × 300	3.2 × 350	4.0 × 400	5.0 × 400	5.8 × 400
Current (A)	40-70	60-90	80-130	140-190	180-230	240-280

X-ray radiographic inspection: Level I

CERTIFICATION

ABS 3Y · BV 3YHH · CCS 3YH10 · DNV 3YH10 · LR 3YmH15 · NK KMW53H10 · KR 3YH10 · RS 3Y40H10 / 3YH10

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