THA022 (E316L-16)

STAINLESS STEEL WELDING ELECTRODE

AWS A5.4 E316L-16
ISO 3581-B-ES316L-16
GB/T 983 E316L-16

APPLICATION

Welding 18% Cr-12% Ni-2% Mo stainless steels, including SUS316L, in petrochemical equipment, food-processing machinery, and medical machinery. Also suitable for chromium stainless steels that cannot be heat treated after welding, clad steels, and dissimilar steels.

CHARACTERISTICS

THA022 is a green-coated, extra-low-carbon rutile-type Cr19Ni13Mo3 stainless steel electrode for all-position welding with AC or DCEP. The deposited weld metal has good heat resistance, corrosion resistance, and crack resistance.

PRECAUTIONS

Re-dry the electrodes at 320-350 °C for 1 hour before welding and use promptly after re-drying. Remove rust, oil, moisture, and other contaminants from the workpiece before welding. DCEP is preferred. With AC, penetration is shallower; avoid excessive current to prevent the coating from becoming red-hot and cracking. Minimize heat input and avoid excessive electrode weaving. Keep preheat and interpass temperatures below 150 °C.

WELDING POSITIONS



MECHANICAL PROPERTIES

Items	Tensile strength (MPa)	Elongation (%)
Requirements	≥490	≥25
Typical results	580	45

DEPOSITED WELD METAL CHEMICAL COMPOSITION (%)

Items	C	Cr	Ni	Mo	Mn	Si	P	S	Cu
Requirements	≤0.04	17.0-20.0	11.0-14.0	2.0-3.0	0.5-2.5	≤1.00	≤0.04	≤0.03	≤0.75
Typical results	0.030	19.01	11.82	2.46	1.01	0.68	0.025	0.015	0.08

TYPICAL OPERATING PROCEDURES

AC / DCEP

Diameter × length (mm)	2.0 × 300	2.5 × 300	3.2 × 350	4.0 × 400	5.0 × 400
Current (A)	25-50	50-80	80-120	110-160	160-200

BRIDGE WELDING MATERIALS