# THY-A316LQ (E316LT1-1)

## GAS-SHIELDED STAINLESS STEEL FLUX-CORED WIRE

Equivalent to AWS A5.22 E316LT1-1
GB/T 17853 TS 316L-FC11

## APPLICATION

Welding extra-low-carbon 18% Cr-12% Ni-2% Mo stainless steel structures in petrochemical equipment, pressure vessels, food-processing machinery, medical machinery, and fertilizer equipment.

## CHARACTERISTICS

THY-A316LQ is an extra-low-carbon, rutile flux-cored stainless steel wire for C1 shielding gas. It supports all-position welding and offers good corrosion resistance due to its high molybdenum content.

## PRECAUTIONS

Use DCEP (electrode positive). Maintain a wire extension of 15-20 mm and a $CO_2$ flow rate of 20-25 L/min. For multipass welding, keep the interpass temperature at or below 120 °C. Remove oil and rust from the base metal before welding to reduce the risk of porosity. The wire is protected against moisture before use. Use promptly after opening and avoid prolonged exposure of unused wire to air.

## WELDING POSITIONS




## MECHANICAL PROPERTIES

| Items | Tensile strength (MPa) | Elongation (%) |
|---|---|---|
| Requirements | ≥485 | ≥25 |
| Typical results | 573 | 35 |

## DEPOSITED WELD METAL CHEMICAL COMPOSITION (%)

CO2

| Items | C | Mn | Si | S | P | Cr | Ni | Mo | Cu |
|---|---|---|---|---|---|---|---|---|---|
| Requirements | ≤0.04 | 0.5-2.5 | ≤1.0 | ≤0.03 | ≤0.04 | 17.0-20.0 | 11.0-14.0 | 2.0-3.0 | ≤0.75 |
| Typical results | 0.036 | 1.21 | 0.55 | 0.004 | 0.03 | 18.67 | 11.82 | 2.47 | 0.05 |

## TYPICAL OPERATING PROCEDURES

DCEP

| Diameter (mm) | 1.2 | 1.6 |
|---|---|---|
| Voltage (V) | 24-30 | 26-32 |
| Current (A) | 140-240 | 200-300 |