

TS-308LB

AWS A5.4 E308L-15
EN ISO 3581-B-ES308L-15
JIS Z3221 ES308L-15

Characteristics and Applications:

The weld metal of TS-308LB is an austenite microstructure containing controlled δ ferrite. The welding can be done in all positions with good X-ray soundness and good mechanical properties. It produces good notch toughness at the temperature as low as -196°C . The electrode is designed for welding of LNG tank.

Notes on usage:

1. Dry the electrodes at $300-350^{\circ}\text{C}$ for 60 minutes and keep it at $100-150^{\circ}\text{C}$ before using.
2. To make the cooling time as short as possible between $500-800^{\circ}\text{C}$ to prevent the intergranular corrosion.
3. Clean up the contaminations on the base metal, groove and pass to pass with stainless steel brush.
4. Use small heat input to reduce dilution, prevent cracking and improve impact value.

Typical chemical composition of weld metal (wt%):

| C | Mn | Si | P | S | Cr | Ni |
|-------|------|------|-------|------|------|------|
| 0.039 | 1.10 | 0.60 | 0.023 | 0.01 | 18.7 | 10.3 |

Typical mechanical properties of weld metal:

| Yield strength MPa(ksi) | Tensile strength MPa(ksi) | Elongation % | Charpy V-Notch J (ft-lbf) -196°C (-320°F) |
|----------------------------|------------------------------|-----------------|---|
| 400(58) | 580(84) | 45 | 35(26) |

Welding position:



Sizes and recommended current range (AC or DC <+>):

| Diameter (mm) | 2.6 | 3.2 | 4.0 | 4.8 | |
|---------------|------|-------|--------|---------|---------|
| Length (mm) | 300 | 350 | 350 | 350 | |
| Amps | F | 60-90 | 80-130 | 130-170 | 160-200 |
| | V&OH | 50-80 | 70-110 | 100-130 | -- |

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