

NOUVE® 316L

Designation

AWS/SFA-5.4: E316L - 16
UNS No. W31613

Welding Positions



Features

- ▶ Excellent arc characteristics
- ▶ Low moisture re-absorption
- ▶ Low spatter level
- ▶ Low smoke level
- ▶ Quick and easy slag removal
- ▶ Radiography quality

Applications

1. Used extensively in molybdenum bearing austenitic stainless steels.
2. Joining of 316L and also dissimilar welding.

Type of Current

Direct Current Electrode Positive (DCEP)

Recommended Welding Techniques

- GENERAL : Electrode positive, work negative (DCEP)
 ARC LENGTH : Short arc
 STORAGE : Re-dry electrodes to 250°C to 300°C for 1 hour before use.

Weld Metal Chemistry

| WELD METAL ANALYSIS (%) | AWS SPEC | TYPICAL |
|-------------------------|-------------|---------|
| Carbon (C) | 0.04 max | 0.031 |
| Manganese (Mn) | 0.5 – 2.5 | 2.227 |
| Phosphorous (P) | 0.04 max | 0.031 |
| Sulphur (S) | 0.03 max | 0.027 |
| Silicon (Si) | 1.0 max | 0.641 |
| Chromium (Cr) | 17.0 – 20.0 | 18.957 |
| Nickel (Ni) | 11.0 – 14.0 | 13.416 |
| Molybdenum (Mo) | 2.0 – 3.0 | 2.671 |
| Copper (Cu) | 0.75 max | 0.421 |
| Iron (Fe) | Balance | 60.763 |

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Mechanical Properties (as welded)

| MECHANICAL TESTS | AWS SPEC | TYPICAL |
|--------------------|------------------------------|----------------------|
| Tensile Strength | 71,069 psi (490 MPa) Minimum | 78,320 psi (540 MPa) |
| Yield Strength | Not Specified | 60,916 psi (420 Mpa) |
| Elongation % in 2" | 30% Minimum | Above 32% |

Dimension, Current Condition & Packing Data

| DIAMETER (IN) | DIAMETER (MM) | PACKAGE | | CURRENT CONDITION (DC+) Amps |
|---------------|---------------|---------|------|------------------------------|
| 3/32 | 2.5 | 2 Kg | 5 Kg | 60 - 90 |
| 1/8 | 3.15 | 2 Kg | 5 Kg | 80 - 110 |
| 5/32 | 4.0 | 2 Kg | 5 Kg | 110 - 150 |
| 3/16 | 5.0 | 2 Kg | 5 Kg | 150 - 180 |