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309L



Description:

Techniweld's 309L is of similar composition as Techniweld's 309 except the carbon content has been held to a maximum of .03%. The lower the carbon content reduces the possibility of intergranular corrosion. Techniweld's 309L is preferred over 309 for cladding over carbon or low alloy steels, as well as for dissimilar joints that undergo treatment.

Approvals:

Manufactured under Quality System approved by ASME. IS09001. Meets AWS5.9 Class ER309L. Approved by Canadian Welding Bureau.

CHEMICAL COMPOSITION

| | |
|------------|---------------|
| Carbon | 0.030 |
| Manganese | 1.000-2.500 |
| Silicon | 0.300-0.650 |
| Chromium | 23.000-25.000 |
| Nickel | 12.000-14.000 |
| Molybdenum | 0.300 |
| Sulfur | 0.020 |
| Phosphorus | 0.030 |
| Copper | 0.300 |

MECHANICAL PROPERTIES

| | |
|-------------------------|---------|
| Tensile Strength | |
| 85,000 PSI | 590 MPA |
| Yield Strength | |
| 58,000 PSI | 400MPA |
| Elongation | 36% |

WELDING PARAMETERS

| | |
|-----------------------------------|--|
| a) <u>MIG WELDING:</u> | Direct current; Electrode +Ve |
| Shielding Gas | 98/99% Argon + 2/1% Oxygen 97% Argon + 3% CO ₂ |
| Gas Flow | 30 to 50 CFH |
| Voltage | 29 to 33 |
| Amperage | 160/180 for .035" (0.9mm) 180/220 for .045" (1.14mm) 210/250 for .062" (1.6mm) |
| b) <u>TIG WELDING:</u> | Direct Current; Electrode -Ve |
| Shielding Gas | 100% Argon |
| Gas Flow | 30 to 40 CFH |
| c) <u>SUB-ARC WELDING:</u> | Direct Current; Electrode + Ve |
| Voltage | 29 to 32 |
| Amperage | 300 to 350 for 3/32" (2.5mm) 400 to 550 for 1/8" (3.14mm) 500 to 650 for 5/32" (4.0mm) |
| Speed of Welding | 20 to 30 IPM (500 to 750mm)/min. |