

## UNS N08904 – Type 904L

### MATERIAL DESCRIPTION

904L is an austenitic stainless steel. In comparison to 316L, its molybdenum addition gives it superior resistance to pitting and crevice corrosion. Its copper addition gives it useful corrosion resistance to all concentrations of sulphuric acid. Its high alloying content also gives it greater resistance to chloride stress corrosion cracking, but it is still susceptible. Its low carbon content makes it resistant to sensitization by welding, which prevents intergranular corrosion.

### APPLICABLE SPECIFICATIONS

ASTM A479/A479M

DIN EN10088-3

DIN EN10272

1.4539 / X1NiCrMoCu25-20-5

### HEAT TREATMENT

Intoco bar stock is in the Solution Annealed condition

### CHEMICAL ANALYSIS RANGE

| ELEMENT | WEIGHT %    | ELEMENT | WEIGHT %    |
|---------|-------------|---------|-------------|
| C       | 0.02 max.   | Cu      | 1.00 – 2.00 |
| Mn      | 2.00 max.   | Fe      | Balance (a) |
| Si      | 1.0 max.    | Mo      | 4.00 – 5.00 |
| Ni      | 23.0 – 28.0 | Cr      | 19.0 – 23.0 |
| P       | 0.045 Max   | S       | 0.035 Max   |
| N       | 0.10 Max    |         |             |

### TYPICAL MECHANICAL PROPERTIES (Min unless stated)

| 0.2% Yield<br>ksi (MPa) | UTS ksi (MPa) | Ductility |     | Hardness HBW |
|-------------------------|---------------|-----------|-----|--------------|
|                         |               | %El 4D    | %RA |              |
| 31 (220)                | 71 (490)      | 35        | -   | -            |

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