

**Soudotec 1690**

DC+

**NICKEL ALLOY****DESCRIPTION**

**Extremely versatile high alloy core Inconel®** type electrode for welding nickel alloys, stainless steels and steels difficult to weld together or as dissimilar assemblies.

**CHARACTERISTICS**

- **Superior resistance to severe stress**
- Excellent corrosion, oxidation and acid resistance
- Exceptional mechanical properties at high or very low temperatures
- Very high elongation
- Maximum resistance to hot cracking
- Excellent all-position weldability

**TYPICAL APPLICATIONS**

Excellent for dissimilar metals and heavy sections, refractory steels, foundry oven parts, valve seats, atomic and petrochemical industries, cryogenic steels, boilers, heat exchangers, shafts, etc.

**PROCEDURE**

Remove any trace of oil, grease and dirt from the surface. Gouge a U-groove on heavy sections with the **Soudotec 212 SP** or **Soudotec G12** electrode. Weld at low amperage using the smallest diameter to limit heat input while maintaining a short arc and minimum weaving. Remove slag between each pass. Always strike the arc on a deposited bead, and never on the base metal. Preheating is generally only required for heavy or restrained parts and high alloy steels. Only use perfectly dry electrodes.

**MECHANICAL PROPERTIES**

Tensile strength:	100 000 psi (689 MPa)
Yield strength:	70 000 psi (483 MPa)
Elongation:	40 - 43%
Impact (Charpy V):	80 J at -196°C

**WELDING PARAMETERS**

Diameter:	4.0 mm (5/32")	3.2 mm (1/8")	2.5 mm (3/32")
Amperage:	100 - 120 A	75 - 100 A	50 - 75 A

Also available in solid MIG wire: **Soudotec M1690**, flux-cored wire: **Soudotec FC 1690G**, TIG rods: **Soudotec T1690** and in "Jet type" electrodes (140%): **Soudotec 1690 SP**

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*Specialized welding alloys and technology. For technical assistance or for ordering:*