Weld Mold® 700

A commercially pure nickel weld deposit is produced which is easily machined, drilled, tapped and filed.

Applications

Weld Mold 700 is preferred for welding thin sections of cast iron where high dilution occurs and maximum machinability is required as encountered on shy castings and machining errors. Weld Mold 700 is also excellent for building up on large castings.

Procedure

Prepare weld area by beveling and cleaning cracked edges to be joined. Use Polychamfer electrodes for all beveling applications. Preheat part to 500°F. Maintain interpass temperature (150°F). Use stringer bead or weaving technique. Peen to relieve stresses. Wrap with thermal blanket and allow casting to cool slowly to room temperature.

<table>
<thead>
<tr>
<th>SMAW</th>
<th>GMAW</th>
<th>GTAW</th>
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<tbody>
<tr>
<td>DC+ or AC</td>
<td>DC+, 90% He 7.5% Ar 2.5% CO2</td>
<td>DC- 100% Ar</td>
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<tr>
<td></td>
<td>75% Ar 25% He</td>
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Technical Data

- **Available Processes:** SMAW, GMAW and GTAW
- **Tensile Strength:** Up to 50,000 psi
- **Alloy Type:** Commercially Pure Nickel
- **Machinability:** Excellent
- **Class:** NiCl
Weld Mold® 750

Weld Mold 750 is for the repair and joining of heavy sections of cast iron. The high carbon in 750 promotes the formation of graphite in the weld metal, thereby reducing shrinkage stresses and the possibility of heat affected zone cracking. 750 weld deposits are machinable. Designed specifically for on-the-job repairs of cast iron, which eliminates the necessity of dismantling equipment. While pre-heating is recommended 750 may be used without pre-heating or post-heating in many instances.

Applications

Use Weld Mold 750 when high strength crack-free welds are required on all cast iron maintenance applications; including motor housings, gears, sprockets, ladles, flasks and transmission housings, Excellent for building up shy areas and filling holes in castings. Use for all repair and joining welds on gray, malleable, ductile and nodular cast iron and their joining to steel alloys.

Procedure

All rust, scale and oil should be removed from the surface to be welded. Preheat casting to 500°F and maintain interpass temperature. Maintain a short arc and use either the stringer bead or slight weaving technique. Skip weld in order to dissipate the heat as evenly as possible into the work piece. Peen rapidly to help relieve stresses. Always back-step the crater before breaking the arc. Clean off slag between passes. Cover the finished unit after welding in order to retard the cooling rate.

<table>
<thead>
<tr>
<th>SMAW</th>
<th>GMAW</th>
<th>FCAW</th>
<th>GTAW</th>
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<tbody>
<tr>
<td>DC+ or AC</td>
<td>DC+, 90% He 7.5% Ar 2.5% CO2 or 75% Ar 25% He</td>
<td>DC+, 100% Ar or 98% Ar 2%O2 or 75% Ar 25% CO2</td>
<td>DC- 100% Ar or Ar with 1-2% Oxygen</td>
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Technical Data

- **Available Processes:** SMAW, GMAW, FCAW and GTAW
- **Machinability:** Good
- **Tensile Strength:** 75,000 psi
- **Class:** NiFe-Cl