ALLOY DESCRIPTION AND APPLICATION;

4340 is a Chromium-molybdenum low alloy wire that will produce a dense, heat-treatable deposit. This alloy is used to weld AISI/SAE 4340 and 4330 and other heat-treatable alloys or base metals needing flame hardening. Preheat and inter-pass recommended and may also need followed by post heat treating.

TYPICAL GMAW WELDING PROCEDURES; DCEP Short Circuit (1) 98Ar/2% O2

<table>
<thead>
<tr>
<th>Wire Diameter</th>
<th>Wire Speed (ipm)</th>
<th>Amps</th>
<th>Volts</th>
<th>Travel speed (ipm)</th>
<th>(cfh)</th>
<th>75/25</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.023</td>
<td>80-350</td>
<td>30-85</td>
<td>14-19</td>
<td>10-15</td>
<td>12-20</td>
<td>20-25</td>
</tr>
<tr>
<td>0.030</td>
<td>110-340</td>
<td>40-130</td>
<td>15-20</td>
<td>12-24</td>
<td>20-25</td>
<td></td>
</tr>
<tr>
<td>0.035</td>
<td>100-520</td>
<td>60-235</td>
<td>16-25</td>
<td>11-40</td>
<td>20-30</td>
<td></td>
</tr>
<tr>
<td>0.045</td>
<td>70-270</td>
<td>90-290</td>
<td>18-23</td>
<td>12-22</td>
<td>25-35</td>
<td></td>
</tr>
</tbody>
</table>

(1) Spr 0.035 320-600 160-300 23-26 11-22 25-35

<table>
<thead>
<tr>
<th>Wire Diameter</th>
<th>Wire Speed (ipm)</th>
<th>Amps</th>
<th>Volts</th>
<th>Travel speed (ipm)</th>
<th>(cfh)</th>
<th>75/25</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.045</td>
<td>170-550</td>
<td>170-375</td>
<td>23-29</td>
<td>12-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/16”</td>
<td>175-350</td>
<td>275-475</td>
<td>25-31</td>
<td>9-19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) 175-350 275-475 25-31 9-19 25-35

TYPICAL GTAW WELDING PROCEDURES; DCEN with EWTh-2 truncated conical tip

<table>
<thead>
<tr>
<th>Filler Wire Size</th>
<th>Tungsten</th>
<th>Amps</th>
<th>Volts</th>
<th>Gas Cup Size</th>
<th>Argon (cfh)</th>
<th>Base thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16”</td>
<td>1/16”</td>
<td>100-160</td>
<td>12</td>
<td>3/8”</td>
<td>20</td>
<td>1/16-3/32”</td>
</tr>
<tr>
<td>1/16-3/32”</td>
<td>3/32”</td>
<td>120-250</td>
<td>12</td>
<td>3/8”</td>
<td>20</td>
<td>1/8-3/16”</td>
</tr>
<tr>
<td>1/8”</td>
<td>1/8”</td>
<td>150-300</td>
<td>12</td>
<td>1/2”</td>
<td>25</td>
<td>1/4-1/2”</td>
</tr>
</tbody>
</table>

Procedures may vary with change in position, base metals, filler metals, equipment and other changes.

TYPICAL WELD CHEMISTRY (% ) & WELD METAL PROPERTIES; 100%Ar (GTAW)

<table>
<thead>
<tr>
<th>Element</th>
<th>Percentage</th>
<th>Property Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>0.35</td>
<td>Welded post weld re-heat treated</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.85</td>
<td>Oil quenched at 1600°F then</td>
</tr>
<tr>
<td>Silicon</td>
<td>0.50</td>
<td>Tempered at 1150°F</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>0.011</td>
<td>200,000 289,000</td>
</tr>
<tr>
<td>Sulfur</td>
<td>0.014</td>
<td>168,000 250,000</td>
</tr>
<tr>
<td>Chromium</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>Nickel</td>
<td>1.80</td>
<td></td>
</tr>
<tr>
<td>Molybdenum</td>
<td>0.25</td>
<td></td>
</tr>
</tbody>
</table>

AVAILABLE SIZES: TU 4340 = Spools and rods of Vacuum melted, Flux cored and Metal core alloys also available

SPECIFICATIONS; AISI/SAE 4340

EAST COAST | GULF COAST | WEST COAST
------------|------------|------------|
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