### BUTT WELDS

**Flat Position**

For use where plates can be turned for downhand welding on both sides.

**PREPARATION:**

- Use of V-groove with 1/8" shoulder
- Recommended gap 1/8" to 1/4"

**ELECTRODE & POLARITY**

- E6011 - AC
- E6027 - AC

<table>
<thead>
<tr>
<th>Plate Thickness (In.)</th>
<th>Electrode Size (In.)</th>
<th>AC Current (Amps.)</th>
<th>Electrode Melt-Off Rate (In. per Min.)</th>
<th>Arc Speed (In. per Min. for First Pass)</th>
<th>Passes or Beads</th>
<th>Ft. of Joint Welded per Hr. (100% Operating Factor)</th>
<th>Lbs. of Electrode per Ft. of Weld</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8</td>
<td># E6011</td>
<td>175</td>
<td>10.0</td>
<td>9.0</td>
<td>1st (2nd &amp; Back)</td>
<td>20.1</td>
<td>.17</td>
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<tr>
<td></td>
<td># E6027</td>
<td>280</td>
<td>12.3</td>
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<td></td>
<td>34</td>
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<tr>
<td>1/4</td>
<td>1/4 E6011</td>
<td>275</td>
<td>9.0</td>
<td>8.2</td>
<td>1st (2nd &amp; Back)</td>
<td>17.4</td>
<td>.23</td>
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<tr>
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<td># E6027</td>
<td>315</td>
<td>10.8</td>
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<td>52</td>
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<tr>
<td>5/8</td>
<td>3/4 E6011</td>
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<td>7.7</td>
<td>1st (2nd &amp; 3rd)</td>
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<td>.24</td>
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<td># E6027</td>
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<td>80</td>
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</tr>
</tbody>
</table>

**Total** 7.1

**Lbs. of Electrode per Ft. of Weld**

- Where the plates cannot be turned over, chip into bead 1 (Figure 2-36) and put the last pass in overhead with the current adjusted to produce an electrode melt-off of approximately 8 1/2" per minute.

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**Note:**

- For high welding speed and economy of joint preparation, use an angle within the permissible range (see Page 2-30) where plates can be turned or downhand welded on both sides and whose joint is flat.

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**Fig. 2-35.**

**Fig. 2-36.**

**TECHNIQUES, PROCEDURES, AND COSTS**

**BUTT WELDS**

**Flat Position—Square Edge—Welded From Both Sides**

**PREPARATION:**

- E6011 or E6011 with the current adjusted to produce an electrode melt-off of approximately 8 1/2" per minute.

**FIT-UP:**

- See Page 2-38.