Flux-Cored TIG rod for open root pass welding with no back purge necessary

**PreMIARC**
- TG-X308L [AWS A5.22 R308LT1-5]
- TG-X309L [AWS A5.22 R309LT1-5]
- TG-X316L [AWS A5.22 R316LT1-5]
- TG-X347 [AWS A5.22 R347T1-5]
- TG-X2209 [N/A]

### Features and typical fields of application

- Flux Cored TIG rod for open root pass without requiring back purging creating slag to protect the back side bead from the oxidation of weld metal.
- Compatible with conventional GTAW welding equipment with DCEN polarity and straight Argon shielding gas.

### Comparison of Time and Shielding gas Consumption

- Back shielding condition per AWS D10.12
- Welding time below includes grinding and tack welding with 50% of arc time percentage
- 50cfh for pre purging, 17cfh is for back shielding and 32cfh for welding is used for the following prediction

- **Example #1**: 2” diameter pipe (root gap; 1/16” for solid wire, 5/64” for TG-X)

- **Example #2**: 12” diameter pipe (root gap; 3/32” for solid wire, 7/64” for TG-X)
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PREMIARC TG-X2209 [N/A]

Typical result of weld metal test with 100%Ar

<table>
<thead>
<tr>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>Cr</th>
<th>Ni</th>
<th>Others</th>
<th>0.2%PS (ksi)</th>
<th>TS (psi)</th>
<th>El (%)</th>
<th>CVN (ft-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.02</td>
<td>0.80</td>
<td>1.66</td>
<td>19.6</td>
<td>10.3</td>
<td>-</td>
<td>65</td>
<td>93</td>
<td>47</td>
<td>94 at 32°F</td>
</tr>
<tr>
<td>0.02</td>
<td>0.81</td>
<td>1.52</td>
<td>24.3</td>
<td>12.6</td>
<td>-</td>
<td>77</td>
<td>99</td>
<td>32</td>
<td>80 at 32°F</td>
</tr>
<tr>
<td>0.02</td>
<td>0.87</td>
<td>1.55</td>
<td>18.9</td>
<td>12.5</td>
<td>Mo: 2.3</td>
<td>64</td>
<td>87</td>
<td>38</td>
<td>88 at 32°F</td>
</tr>
<tr>
<td>0.02</td>
<td>0.80</td>
<td>1.60</td>
<td>19.1</td>
<td>10.2</td>
<td>Nb: 0.7</td>
<td>67</td>
<td>91</td>
<td>48</td>
<td>94 at 32°F</td>
</tr>
<tr>
<td>0.02</td>
<td>0.64</td>
<td>0.87</td>
<td>23.1</td>
<td>9.5</td>
<td>Mo: 3.3 N: 0.15</td>
<td>88</td>
<td>118</td>
<td>32</td>
<td>102 at -60°F</td>
</tr>
</tbody>
</table>

Recommended welding conditions and deposition rate

<table>
<thead>
<tr>
<th>Plate Thickness</th>
<th>Root Gap</th>
<th>Welding Current (DCEN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8” to 3/16”</td>
<td>5/64”</td>
<td>80 – 90A</td>
</tr>
<tr>
<td>1/4”-11/16”</td>
<td>3/32”</td>
<td>90 – 105 A</td>
</tr>
<tr>
<td>over 3/8”</td>
<td>7/64”</td>
<td>90 – 110A</td>
</tr>
</tbody>
</table>

Note:
- Formation of key-hole during welding is the key in order to supply slag onto reverse side bead.
- Use TG-X for root pass in single side welding only not for filler or cap passes.

Table shown are approximate values that will vary depending on welding conditions (WESO, Cable length etc.). Arc voltage shown are for straight CO₂ shielding gas. For 75%Ar-25%CO₂ use two volts less than shown.

Size /Packages

0.087” diameter x 39” length in 11lbs polyethylene tube

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