DW-A55LSR
Rutile flux cored wire for high strength steel applicable to post weld heat treatment with Ar-CO₂ mixed gas
AWS A5.29 E81T1-Ni1M
CWB CSA W48-18 E491T-M21P6-Ni1-H8

Features and typical fields of application
➢ 80 ksi class rutile flux cored wire suitable for post weld heat treatment (PWHT) without adverse degradation of mechanical properties while retaining acceptable mechanical properties
➢ Excellent impact toughness value down to -76°F in the As-Welded condition and typical PWHT condition
➢ DW-A55LSR is designed to be used with 80%Ar-20%CO₂ shielding gas. It has a wide welding parameter range which makes this product very versatile for all position welding
➢ The optimized chemical design of the weld metal provides superior mechanical properties suitable for the most demanding industry specifications

Mechanical properties of weld metal per AWS A5.29 with typical PWHT conditions

<table>
<thead>
<tr>
<th>PWHT condition</th>
<th>L.M.P.* (x10³)</th>
<th>0.2% PS (ksi)</th>
<th>TS (ksi)</th>
<th>El (%)</th>
<th>CVN (ft-lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-76°F</td>
</tr>
<tr>
<td>As Welded</td>
<td>.</td>
<td>72</td>
<td>82</td>
<td>30</td>
<td>76</td>
</tr>
<tr>
<td>1020°F x 2hr</td>
<td>16.7</td>
<td>67</td>
<td>80</td>
<td>31</td>
<td>86</td>
</tr>
<tr>
<td>1020°F x 4hr</td>
<td>17.0</td>
<td>67</td>
<td>81</td>
<td>32</td>
<td>74</td>
</tr>
<tr>
<td>1110°F x 2hr</td>
<td>17.7</td>
<td>67</td>
<td>80</td>
<td>34</td>
<td>73</td>
</tr>
</tbody>
</table>

* Larson-Miller Parameter; (T+20)\log(t), where T: Temperature/K, t: time/h

Chemical Composition of weld metal per AWS A5.29 (%)

<table>
<thead>
<tr>
<th>Shielding Gas</th>
<th>C</th>
<th>Si</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Ni</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%Ar-20%CO₂</td>
<td>0.07</td>
<td>0.28</td>
<td>1.29</td>
<td>0.008</td>
<td>0.008</td>
<td>0.97</td>
<td>Ti, B</td>
</tr>
</tbody>
</table>
**Recommended welding conditions and deposition rate**

<table>
<thead>
<tr>
<th>Wire Dia.</th>
<th>Wire Feed Speed (in/min)</th>
<th>Current (A)</th>
<th>Arc Voltage (V)</th>
<th>Deposition Rate (lbs/hr)</th>
<th>Wire Stick-Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.045”</td>
<td>140</td>
<td>120</td>
<td>21-24</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>160</td>
<td>23-26</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>290</td>
<td>200</td>
<td>25-28</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>330</td>
<td>220</td>
<td>25-28</td>
<td>9.0</td>
<td>3/4”</td>
</tr>
<tr>
<td></td>
<td>400</td>
<td>250</td>
<td>26-28</td>
<td>10.5</td>
<td></td>
</tr>
</tbody>
</table>

**Available Products**

<table>
<thead>
<tr>
<th>Wire Dia.</th>
<th>Package</th>
<th>28 lbs spool</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.045”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diffusible Hydrogen Content per AWS A4.3**

| 3.9 mL/100g | ABS, CWB, LR, DNV-GL |

**WARNING:** This product can expose you to chemicals including Nickel and Titanium Dioxide, which are known to the State of California to cause cancer, and Chromium, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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- Information contained herein is subject to change without notice. Please kindly contact Kobelco for latest information.