**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**
**STEEL GIRDER BEARING PLATE**
**WELDING PROCEDURE SPECIFICATION (WPS) AWS D1.5**

Specifications & Codes: NCDOT Standard Specifications/AASHTO/AWS D1.5, Section 2, 5 and 12


Filler Metal Specification: AWS A5.1 Classification: E-7018

Manufacturer: NCDOT Approved Electrodes Single or Multiple Pass both Position of Weld Flat, Horizontal

Welding Current: DC Polarity: Positive Progression: N/A

Root Treatment: N/A

Preheat Temp: 100° minimum Interpass: 450° maximum Post Heat: N/A

<table>
<thead>
<tr>
<th>Pass Num.</th>
<th>Electrode Size</th>
<th>Welding Current</th>
<th>Travel Speed</th>
<th>Joint Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>1/8”</td>
<td>90-150</td>
<td>20-23</td>
<td>SEE ATTACHMENT</td>
</tr>
<tr>
<td></td>
<td>5/32”</td>
<td>120-200</td>
<td>21-24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3/16”</td>
<td>170-280</td>
<td>21-24</td>
<td></td>
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</tbody>
</table>

**PREHEAT**

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Min. Temp.</th>
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<tbody>
<tr>
<td>Up to 3/4&quot;</td>
<td>100°</td>
</tr>
<tr>
<td>Over 3/4&quot; to 1 1/2&quot;</td>
<td>100°</td>
</tr>
<tr>
<td>Over 1 1/2&quot; to 2 1/2&quot;</td>
<td>150°</td>
</tr>
<tr>
<td>Over 2 1/2&quot;</td>
<td>225°</td>
</tr>
</tbody>
</table>

**COMMENTS:**

Remove all coating, rust, dirt and mill scale within one inch of the area to be welded prior to fit-up. Remove all slag, spatter and weld discontinuities between passes. Clean the completed weld of all debris, slag and spatter.

Care shall be taken to not exceed 250° in the proximity of the Elastomeric Bearing material.

WPS Description: Steel Girder Bearing Plate

Written By: Randy Dempsey, CWI/CWE, TT IV

Signature:

WPS #: 080708002

Authorized By: Steve Walton, Metals Engineer

Revised #: 4

Signature:

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)
Steel Girder Bearing Plate Details

Weld Symbol definitions per AWS A2.4:2007

Field Weld Symbol

Fillet Weld, both sides with Weld Size

5/16" min
Illustrations for welding steel girders to a bearing plate.

Unacceptable weld (overlap at the bottom toe, undercut at the top toe, inadequate cleaning)

Acceptable weld (needs to be coated)

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)