NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
STEEL GIRDER SIP ANGLE
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 single 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>6-9 ipm</td>
</tr>
</tbody>
</table>

PREHEAT

<table>
<thead>
<tr>
<th>Thickness</th>
<th>Min. Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 3/4”</td>
<td>100°</td>
</tr>
<tr>
<td>Over 3/4” to 1 1/2”</td>
<td>100°</td>
</tr>
<tr>
<td>Over 1 1/2” to 2 1/2”</td>
<td>150°</td>
</tr>
<tr>
<td>Over 2 1/2”</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. Repair all weld discontinuities. Clean the completed weld of all debris, slag and spatter.

WPS Description: Steel Girder SIP Angle
Written By: Randy Dempsey, CWI/CWE, TT IV
Signature: Randy Dempsey

WPS #: 010909005
Authorized By: Steve Walton, Metals Engineer

Revision #: 5
Signature: [Signature]

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)
STEEL GIRDER
SIP ANGLE DETAILS

Weld Symbol definitions per AWS A2.4:2007

FIELD WELD SYMBOL

FILLET WELD, ARROW SIDE
Illustrations for welding a SIP angle to a steel girder.

Unacceptable weld (incomplete fusion at the top toe of weld)

Acceptable weld (slag needs to be removed)

NCDOT MATERIALS & TESTS UNIT (STEEL SECTION)