DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 13.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-014616
Date Inspected: 07-Jun-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Oregon Iron Works Clackamas, Or.

OSM Arrival Time: 1000
OSM Departure Time: 1830
Location: Clackamas, OR

CWI Name: M. Gregson, J. Salazar, G. Mundt

CWI Present:	☑ Yes	☐ No		**Inspected CWI report:**	☐ Yes	☑ No	☐ N/A
Rod Oven in Use:	☐ Yes	☐ No	☑ N/A	**Electrode to specification:**	☑ Yes	☐ No	☐ N/A
Weld Procedures Followed:	☑ Yes	☐ No	☐ N/A	**Qualified Welders:**	☑ Yes	☐ No	☐ N/A
Verified Joint Fit-up:	☑ Yes	☐ No	☐ N/A	**Approved Drawings:**	☑ Yes	☐ No	☐ N/A
Approved WPS:	☑ Yes	☐ No	☐ N/A				
Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A				

Bridge No: 34-0006
Component: Hinge K Pipe Beams

Summary of Items Observed:

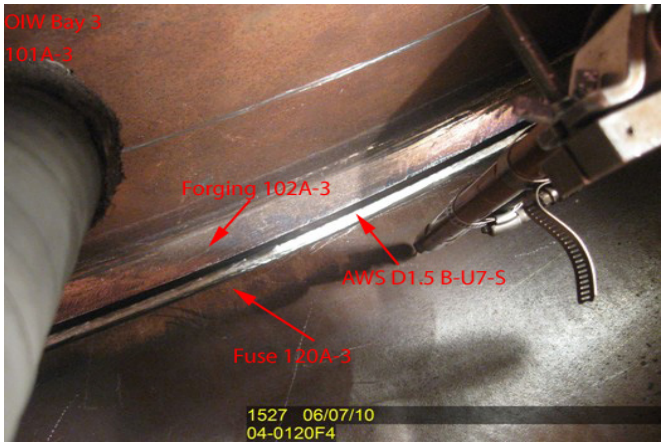
The Quality Assurance Inspector Sean Vance arrived on site at Oregon Iron Works, Inc (OIW) in Clackamas, OR, to randomly observe the in process welding of the Hinge K Pipe Beam assemblies. The QA Inspector arrived on site to randomly observe the OIW Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

Hinge-K Pipe Beam Assembly 101A-3:
The QA Inspector observed that WID #S53 (Jerry Shepherd) was currently in process of performing the submerged Arc Welding (SAW), on the Weld Joint #W4-01. The QA Inspector noted that this Complete Joint Penetration (AWS D1.5 B-U7-S), was the Fuse 120A-3 to Forging 102A-3 and that the SAW was being performed from the interior of the weld joint in the flat position. The QA Inspector observed that continuous pre-heat was being applied utilizing 2 previously set up stationary rosebud torches, on the outside of the weld joint.
The QA Inspector verified that WID #S53 was currently qualified for this and randomly observed that WID #S53 had the applicable Welding Procedure Specification 4016, nearby the work area.
The QA Inspector observed that OIW QC Inspector Jose' Salazar was present, during this shift to monitor the welding activities being performed on the project. The QA Inspector spoke with QC Inspector Jose' Salazar and QC Inspector Salazar explained that he had previously recorded in process SAW parameters of 565 amps and 34.7 volts, during the SAW fill passes. QC Inspector Salazar explained that he had previously recorded a travel speed of 22 inches per minute. The QA Inspector noted that these welding parameters appeared to in compliance with the applicable WPS.
QC Inspector Salazar explained that the stationary torches will remain in place to continue the pre-heat and a Swing Shift welder will continue with the SAW.

The QA Inspector was present on this swing shift and observed WID #S74 (Bounheune Savanh) continuing to perform the SAW, on the above mentioned weld joint. The QA Inspector noted that WID #S74 was currently qualified for this process and position. The QA Inspector observed that OIW QC Inspector Gary Mundt was present on this shift and QC Inspector Mundt explained that WID #S74 will continue the SAW on the interior of the weld joint, for the entire shift. QC Inspector Mundt explained that he had recorded welding parameters of 565 amps, 35 volts and a travel speed of 22 inches per minute. The QA Inspector randomly verified the parameters and they appeared to be in compliance with the applicable WPS. The QA Inspector then randomly verified a pre heat temperature of approximately 350 degrees Fahrenheit.

AG Machining (Boring, OR)
On this date, the QA Inspector arrived at AG Machine Works to witness the final machining, on this Fuse 120A-8. Upon arrival, the QA Inspector observed that the Fuse was slowly rotating in a horizontal lathe and final machining was in process. The QA Inspector observed that AG Machinist Terry Schmale was present at the time and Mr. Schmale explained that the second cut was in process, approximately 95 % complete.
The QA Inspector had been previously informed by AG that a third cut pass and finish honing will be required to machine the Fuse to the top end of the required tolerance of 1920 mm +/- 1mm. See attached pictures below.

Material, Equipment, and Labor Tracking (MELT)
QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project. The QA Inspector observed at Oregon Iron Works Clackamas: 4 OIW production personnel and 2 QC Inspectors.



Summary of Conversations:
As noted above.
Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By: Vance,Sean Quality Assurance Inspector

WELDING INSPECTION REPORT

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Reviewed By: Adame,Joe QA Reviewer