

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010779**Date Inspected:** 16-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** M. Gregson, J. Salazar**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 102A-3: 12/16/09

a111-3 Forging to a110-3 Base Plate

The QA Inspector noted that OIW welder # O6, Mr. Tim O'Brian was continuing to blend the weld start/stops, removing weld spatter and grinding all areas, which were previously marked by OIW QC Inspectors. The QA Inspector noted that these areas were on the previously completed submerged arc welded (SAW), HPS 485W stiffeners, designated as weld joints #W1-01 thru W1-163. The QA Inspector spoke with QC Inspector Jose Salazar and Mr. Salazar explained that the visual clean-up that was being performed by Mr. O'Brian, was intermittently monitored and areas that were completed, were then visually re-inspected. Mr. Salazar explained to the QA Inspector that he had performed 100% magnetic particle testing on the following partial penetration weld joints: #W1-127, W1-161, W1-162 and W1-163. Mr. Salazar explained that the above mentioned weld joints were visually acceptable per AWS D1.5 and no rejectable indications were found, during the magnetic particle testing.

Hinge-K Pipe Beam Assembly 102A-1: 12/15/09

a111-1 Forging to a110-1 Base Plate

The QA Inspector noted that welder #T23, Mr. John Tellone, was continuing to performing the submerged arc welding (SAW) on the a109 Post Tension Cap Plate to ab106 stiffener. The QA Inspector noted that this weld joint

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was designated as #W2-24/partial joint penetration (AWS D1.5 TC-P4-S) and Mr. Tellone was performing the SAW in the flat (1G) position. The QA Inspector noted that Mr. Tellone was utilizing OIW approved welding procedure specification (WPS 4020). The QA Inspector noted that QC Inspector Jose Salazar, was present and intermittently verified the in-process welding parameters and pre-heat temperatures. The QA Inspector spoke with QC Inspector Jose Salazar and Mr. Salazar explained that welding parameters were recorded at 563 amps/35 volts, with a pre-heat of approximately 350 degrees Fahrenheit (177 C). QA Inspector randomly verified pre-heat of approximately 350 degrees Fahrenheit (177 C). The QA Inspector noted that the SAW performed by Mr. Tellone appeared to be in compliance with AWS D1.5 and WPS 4020.

### 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: 2 OIW production personnel and 1 QC Inspector. The QA Inspector noted that the following personell were present at AG Machine shop: 1AG machinist and 1 AG supervisor. The QA Inspector noted that no work was performed at OIW Vancouver paint shop.



### 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.

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<b>Inspected By:</b>	Vance,Sean	Quality Assurance Inspector
<b>Reviewed By:</b>	Adame,Joe	QA Reviewer

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