

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-010940**Date Inspected:** 30-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:

AG Machining (Boring,OR)

On this date, the QA Inspector arrived at AG Machine, to observe the gas tungsten arc welding (GTAW) on the previously excavated areas, that were discovered during the informal PT by OIW QC Inspector Jose´ Salazar. The QA Inspector met with QC Inspector Salazar, OIW welder (WID# C34) Mark Craig & an OIW Machinist. QC Inspector Salazar explained that the GTAW will be performed by Mr. Craig, utilizing OIW welding procedure specification (WPS) 8022. The QA Inspector noted that Mr. Craig was currently qualified to perform these repairs and Mr. Salazar explained that the position will be rotated to flat, per the procedure. The QA Inspector witnessed Mr. Craig performing the pre-heat required, utilizing a torch and then observed a temperature of approximately 150 degrees Fahrenheit, after the pre-heat was complete. The QA Inspector noted that 125 degrees Fahrenheit minimum was required, per WPS 8022. The QA Inspector witnessed AG Machinist rotating the fuse assembly to access the weld repair areas in the flat position. The QA Inspector then observed Mr. Mark Craig performing the GTAW on the previously excavated repair areas. The QA Inspector also observed QC Inspector Jose Salazar recording the in-process welding parameters of 121 amps and 16.1 volts. The QA Inspector also verified these welding parameters. The QA Inspector also observed several more indications that would need to go through the above mentioned repair procedure. The QA Inspector noted that there were approximately 91 individual repairs on the overlay and that OIW would complete all of these by end of shift. The QA Inspector observed that Mr. Salazar

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was present the entire time in which the GTAW welding was being performed. AG explained to the QA Inspector that they will start cutting the third and final pass, on 12/31/09. AG explained the depth will be set to approximately .005" (.13mm), to achieve the final outside diameter measurement of 1921mm, per the contract requirements. AG explained that the honing will start after this, to achieve the required surface finish of .8um. The QA Inspector noted that the GTAW performed by Mr. Craig, appeared to be in compliance with AWS D1.5 and WPS 8022. See attached pictures below.

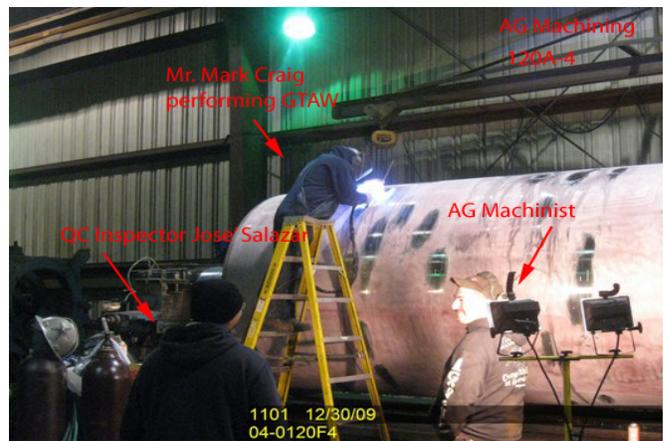
Material, Equipment, and Labor Tracking

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 observed at AG Machine shop: 1 AG machinist, 1 OIW welder and 1 OIW QC.

The QA Inspector noted that no work was performed at OIW Vancouver paint shop.



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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
Reviewed By:	Adame,Joe	QA Reviewer
