

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-009687**Date Inspected:** 15-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Mike Gregson, Jose 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:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Assembly 102A-3: 10/15/09

a111-3 Forging to a110-3 Base Plate

QA Inspector noticed this assembly 102A-3 had been previously placed in position and welder #06, Mr. Tim O'Brian, was in process of performing submerged arc welding, on the a108 stiffener plate to a111-3 tubular forging, designated as weld joint # W1-145, in the flat position. QA Inspector noted that this weld joint was designated as a partial joint penetration (AWS D1.5 TC-P5-S) and QA Inspector verified Mr. O'Brian was currently qualified for this process/position. QA Inspector noted that Mr. O'Brian was utilizing OIW approved welding procedure specification (WPS 4016) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit (177 C). QA Inspector noticed QC Inspector Jose Salazar was present to monitor in-process welding parameters (amps/volts) and noted that Mr. Salazar had previously recorded in-process welding parameters of 405 amps and 30 volts, on the in-process welding root pass. QA Inspector verified in-process welding parameters of 410 amps and 30 volts, which appears to be in compliance with the applicable welding procedure specification and contract requirements.

QA Inspector noticed that welder #J6, Mr. Craig Jacobson, was in process of performing submerged arc welding, on the b107 stiffener plate to a111-3 tubular forging, designated as weld joint # W1-152, in the flat position. QA

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Inspector noted that this weld joint was designated as a partial joint penetration (AWS D1.5 TC-P5-S) weld and QA Inspector verified Mr. Jacobson was currently qualified for this process/position. QA Inspector noted that Mr. Jacobson was utilizing OIW approved welding procedure specification (WPS 4016) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit (177 C). QA Inspector noticed QC Inspector Jose Salazar was present to monitor in-process welding parameters (amps/volts) and noted that Mr. Salazar had previously recorded in-process welding parameters of 563 amps and 35 volts, on the in-process cover passes. QA Inspector verified in-process welding parameters of 570 amps and 35 volts, which appears to be in compliance with the applicable welding procedure specification and contract requirements.

Note: QA Inspector later spoke with QC Inspector Jose Salazar and Mr. Salazar explained that the following weld joints, on the radial stiffeners, were completed by Mr. O'Brian and Mr. Jacobson, by end of shift: WJ #W1-152, W1-162, W1-126, W1-148, W1-145, W1-124, W1-160 and W1-158. Mr. Salazar also explained that 100% magnetic particle testing was performed on the above mentioned FCAW root passes and no rejectable indications were found, per AWS D1.5 and contract requirements.

Hinge-K Pipe Beam Assembly 102A-4: 10/15/09

a111-4 Forging to a110-4 Base Plate

QA Inspector was notified by QC Inspector Jose Salazar welder #T23, Mr. John Tellone, was currently in-process of performing submerged arc welding. Mr. Salazar explained to QA Inspector that Mr. Tellone was performing the submerged arc welding on the a109 Post Tension Cap Plate to ab106 stiffener, designated as weld joint #W2-18, in the flat (1G) position, utilizing OIW approved welding procedure specification (WPS 4020). QA Inspector noted that QC Inspector Jose Salazar, was present on this day and intermittently verified the in-process welding parameters and pre-heat temperatures, to insure compliance with the applicable welding procedure specifications and AWS D1.5. QA Inspector randomly performed an in-process verification of welding parameters and recorded amps/volts of 420/30 and a pre-heat temperature of approximately 350 degrees Fahrenheit (177 C). See attached picture 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: 5 OIW production personnel and 2 QC Inspectors.



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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
