

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: 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-009928**Date Inspected:** 29-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		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	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: 10/29/09

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 d108 stiffener plate to a106 stiffener, designated as weld joint # W1-65, in the flat position. QA Inspector noted that this weld joint was designated as a 10mm fillet weld 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 4020) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit (177 C). QA Inspector noticed QC Inspector Mike Gregson was present to monitor in-process welding parameters (amps/volts) and Mr. Gregson had previously recorded in-process welding parameters of 422 amps and 31 volts, during the welding root pass. QA Inspector verified in-process welding parameters of 428 amps and 30.5 volts and noted that the submerged arc welding, performed by Mr. O'Brian, appeared to be in compliance with the applicable welding procedure specification and AWS D1.5. QA Inspector later noted that Mr. O'Brian had completed the above mention root pass and verified in-process welding parameters of 568 amps and 34.3 volts, on the SAW cover passes, on this weld joint #W1-65. See attached pictures below.

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QA Inspector noticed that welder #J6, Mr. Craig Jacobson, was in process of performing submerged arc welding, on the a107 stiffener plate to ab106 stiffener, designated as weld joint # W1-38, in the flat position. QA Inspector noted that this weld joint was designated as a 25mm fillet 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 4020) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit (177 C). QA Inspector noticed QC Inspector Mike Gregson was present to monitor in-process welding parameters (amps/volts) and Mr. Gregson had previously recorded in-process welding parameters of 580 amps and 35 volts, on the in-process welding cover passes. QA Inspector verified the in-process welding parameters, as mentioned above and noted that the submerged arc welding, performed by Mr. Jacobson appeared to be in compliance with the applicable welding procedure specification and AWS D1.5.

QA Inspector noted that 100% magnetic particle testing was performed on the above mentioned root passes, by QC Inspector Mike Gregson and no rejectable indications were found, per AWS D1.5 and contract requirements. Note: QA Inspector later noted that the following fillet weld joints were completed by Mr. O'Brian and Mr. Jacobson, by end of shift: WJ# W1-65, W1-61, W1-42, W1-46, W1-50, W1-38, W1-01, W1-05, W1-09, W1-13, W1-17, W1-21, W1-25 and W1-29.

Hinge-K Pipe Beam Assembly 102A-4: 10/29/09

a111-4 Forging to a110-4 Base Plate

QA Inspector noticed this assembly 102A-4 had been previously placed in position and welder #T23, Mr. John Tellone, was in process of performing submerged arc welding, on the a109 Post Tension Cap plate to ab106 stiffener, designated as weld joint # W2-24, in the flat position. QA Inspector noted that this weld joint was designated as partial joint penetration (AWS D1.5 TC-P4-S) and QA Inspector verified Mr. Tellone was currently qualified for this process/position. QA Inspector noted that Mr. Tellone was utilizing OIW approved welding procedure specification (WPS 4020) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit (177 C). QA Inspector noted that QC Inspector Mike Gregson was present to monitor in-process welding parameters (amps/volts) and Mr. Gregson had previously recorded in-process welding parameters of 422 amps and 31 volts, during the welding root pass, which appeared to be in compliance with the applicable welding procedure specification and AWS D1.5. See attached picture below.

Material, Equipment, and Labor Tracking

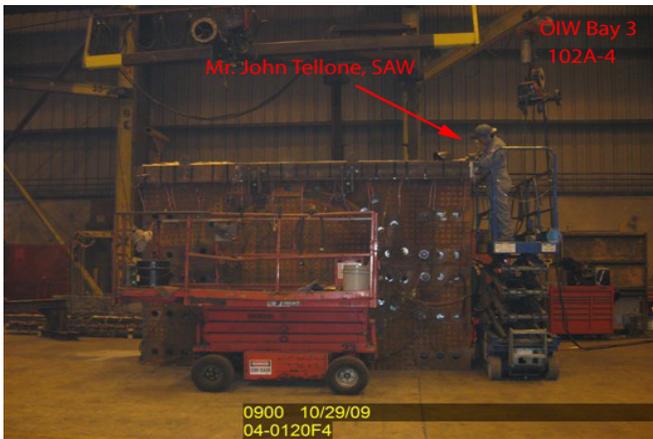
QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project. The QA Inspector observed at Oregon Iron Works: 5 OIW production personnel and 2 QC Inspectors.

The QA Inspector noted that the following were present at AG Machine shop: 1 Machinist and 1 Supervisor.

The QA Inspector noted that the following were present OIW Vancouver paint shop: 1 Painter and 1 Supervisor.

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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.

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Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer
