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-010789
Date Inspected: 18-Dec-2009

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	**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: 12/18/09
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 the critical weld repairs (CWR's) #2244-009 and 2244-010 had been previously excavated out, by Mr. O'Brian. Mr. Salazar explained to the QA Inspector that the measurements recorded on the excavations are as follows: CWR #009 75mm L x 13mm W x 9mm D, CWR #010 30mm L x 17mm W x11mm D. Mr. Salazar explained that 100% visual/ magnetic particle testing was performed and no rejectable indications were found. Mr. Salazar explained to the QA Inspector, that no welding would occur, prior to OIW submittal paperwork and state approval of these CWR's #2244-009 and 010.

Hinge-K Pipe Beam Assembly 102A-1: 12/18/09

a111-1 Forging to a110-1 Base Plate

The QA Inspector witnessed welder #T23, Mr. John Tellone, performing the submerged arc welding (SAW) on the a109 Post Tension Cap Plate to a106 HPS 485W stiffener. The QA Inspector noted that this weld joint was designated as a partial joint penetration (AWS D1.5 TC-P4-S), weld joint #W2-19 and Mr. Telone was performing the SAW in the flat (1G) position. The QA Inspector noted that Mr. Tellone was currently performing the SAW cover passes and noted that OIW approved welding procedure specification (WPS 4020), was being utilized. The QA Inspector noted that QC Inspector Jose Salazar, was present and Mr. Salazar explained to the QA Inspector that the in-process welding parameters/pre-heat temperatures, were intermittently verified. Mr. Salazar explained that average welding parameters for the SAW cover passes, were recorded at 563 amps/35 volts, with a pre-heat of approximately 350 degrees Fahrenheit (177 C). Mr. Salazar explained to the QA Inspector that the SAW root pass had been previously completed by Mr. Tellone and 100% Visual/ Magnetic particle testing had been performed. Mr. Salazar explained that no rejectable indications were found. The 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. See attached picture 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: 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.

WELDING INSPECTION REPORT

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