

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-010150**Date Inspected:** 17-Nov-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:

Hinge-K Pipe Beam Assembly 102A-3: 11/17/09

a111-3 Forging to a110-3 Base Plate

QA Inspector noticed that the partial joint penetration and fillet welds were previously completed, on the HPS 485W stiffeners and OIW production personell were in-process of performing weld clean-up and occasional FCAW on the weld joints, identified as WJ#'s W1-01 thru W1-163. QA Inspector spoke with QC Inspector Jose Salazar and Mr. Salazar explained that OIW welder #06, Mr. Tim O'Brian and #T23, Mr. John Tellone were continuing to grind the weld start/stops, removing weld spatter and grinding all areas, which were previously marked by OIW QC Inspectors, per AWS D1.5 visual criteria and contract requirements. Mr. Salazar explained that minor underfill and undercut had been previously measured on weld joints # W1-123 (piece mark e108/a107), #W1-127 (e108/a110), #W1-129 (d108/a110) and #W1-115 (f108/a107), exceeded the limits of AWS D1.5 visual testing requirements and required a FCAW fill pass. QA Inspector noted that Mr. Salazar was present during the FCAW repair and had recorded average, in-process welding parameters of 262 amps/26.2 volts, 10 i.p.m. travel speed, with a pre-heat temperature of approximately 400 degrees Fahrenheit (204 C). QA Inspector noted that the welding procedure specifications (WPS 3049 and WPS 3050) were utilized for the repairs and welding parameters/pre-heat temperatures appeared to in compliance with the above mentioned WPS's. Mr. Salazar also explained that a total of 4 base metal arc strikes, on the forging (a111-3), were noted during the in-process visual

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inspection and Mr. O'Brian had previously performed the repairs (shallow grinding), per AWS D1.5, sect. 3.10. Mr. Salazar explained that the arc strikes had been ground out to sound base metal and 100% magnetic particle testing was then performed, with no rejectable indications present and that the Brinell hardness values were acceptable. Mr. Salazar explained that the clean-up/grinding and welding, performed by Mr. O'Brian and Mr. Tellone, was periodically monitored and the welds visually re-inspected, in accordance with AWS D1.5 and an applicable visual testing report was then completed. See attached picture below.

Note: QA Inspector previously spoke with Lead QC Inspector Mike Gregson and Mr. Gregson explained that once all the visual testing, on the above mentioned stiffeners was complete and acceptable, 100% magnetic particle inspection will then be performed on the PJP and fillet weld joints. Mr. Salazar explained that 100% magnetic particle testing will be performed on the above mentioned weld joints W1-123, W1-127, W1-129 and W1-115, after the minimum 48hrs. cooling time, per AWS D1.5, sect. 12.16.4 and contract requirements.

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 2 QC Inspectors.

The QA Inspector noted that no work was performed at AG Machine shop.

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.

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