

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-008400**Date Inspected:** 07-Aug-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-1: 8/7/09

a111-1 Forging to a110-1 Base Plate

QA Inspector noticed this assembly 102A-1 had been previously placed in position and welder #O6, Mr. Tim O'Brian, was in process of performing submerged arc welding, on the e108 stiffener plate to a111-1 forging, designated as weld joint # W1-147, in the flat position. QA Inspector noted that this weld joint was designated as AWS D1.5 TC-P5-S and 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. 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 580 amps and 34 volts, which appears to be in compliance with the applicable welding procedure specification and contract requirements.

QA Inspector noticed welder #T23, Mr. John Tellone, was in process of performing submerged arc welding, on the d108 stiffener plate to a111-1 forging, designated as weld joint # W1-128, in the flat position. QA Inspector noted

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that this weld joint was designated as AWS D1.5 TC-P5-S and verified Mr. Tellone was currently qualified for this process/position. QA Inspector noted that Mr. Tellone was utilizing OIW approved welding procedure specification (WPS 4016) and randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit. 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 470 amps and 28 volts, which appears to be in compliance with the applicable welding procedure specification and contract requirements.

OIW Fabrication Shop-Bay 6 (ESW Overlay Process)

Hinge-K Pipe Beam Fuse Assembly 120A-2: 8/7/09

a124-3 Half Fuse to a124-11 Half Fuse

QA Inspector noticed that OIW production personell were in-process of setting up this fuse assembly 120A-2, on the mechanical rollers, in preparation for the ESW overlay. QA Inspector spoke with lead QC Inspector Mike Gregson and Mr. Gregson explained that the ESW will probably start on 8/10/09 and OIW QC Inspector will be present to verify set-up and monitor in-process welding parameters (amps/volts) and pre-heat temperatures.

Hinge-K Pipe Beam Fuse Assembly 120A-3: 8/7/09

a124-12 Half Fuse to a124-10 Half Fuse

QA Inspector noted that the final "trial" machining on fuse assembly 120A-3 had been completed, by AG Machining, to a outside diameter of 1921.5mm and OIW had previously picked up this fuse assembly 120A-3 and this assembly was idle. QA Inspector spoke with lead QC Inspector Mike Gregson and Mr. Gregson explained that random "preliminary" penetrant testing had been performed on the finished ESW overlay, after final "trial" machining. Mr. Gregson explained that 6ea. 2' x 2' (610mm x 610mm) random grid locations were tested and no rejectable indications were found.

Note: Fuse assembly 120A-3 will be eventually transferred back to AG Machining and AG will machine a final outside diameter of 1920mm (+/- 1mm), per contract requirements and OIW approved drawings. 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: 6 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.

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