

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-015164**Date Inspected:** 25-Jun-2010**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:** 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:**

Caltrans Quality Assurance Lead Inspector (QA) Joe Adame was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR to perform observations relative to the fabrication of the Hinge K Pipe Beams and related activities. The following was documented:

The QA Inspector was present to observe OIW preparing to start work on OIW Critical Weld Repair (CWR) #27 on Hinge K Pipe Beam (HPB) 101a-3. On 6/24/10 OIW was given a verbal approval to proceed with the CWR by METS Representative Robert Mertz. OIW Production Leadman Troy Smith informed the QA Inspector that welder Craig Jacobsen (WID# J6) was in the process of preheating with a gas torch to commence air carbon arc gouging. The QA Inspector was informed that the repair work would be easier to access from the exterior of HPB. The QA Inspector later observed OIW WID# J6 performing the air carbon arc gouging. OIW QC Inspector Jose Salazar was also present and stated that he had verified the preheat at 150° degrees Fahrenheit prior to commencing the gouging. Mr. Salazar also stated that the welder observed a slag inclusion approx 48 mm deep and 15 mm in length. The excavation was then ground to bright metal and cleaned of visible contaminants. The QA Inspector then observed Mr. Salazar perform MT to ensure the removal of the weld discontinuity. The QA Inspector measured the weld excavation at: 56 mm deep by 42mm wide and 165 mm long. No rejectable indications were observed.

After the excavation was accepted by OIW QC, the QA Inspector observed Welder J6 performing FCAW in the vertical position (3G) in using approved welding procedure specification (WPS) 3048 Revision 1. The location of the welding is on weld joint#4-01 R2. QC Inspector Jose Salazar stated that he had verified the in-process welding parameters and pre-heat temperature. The QC Inspector stated that he had observed the average welding

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parameters at 235 amps and 24 volts with a pre-heat temperature of 400 degrees Fahrenheit (204° C). Travel speed was measured at 170 mm/min. The QA Inspector verified the welding parameters and observed a reading of 241 amps and 25 volts. The QA Inspector also verified the preheat temperature with a 204° Celsius temperature indicator. Preheat was sufficient. Welder J6 continued welding on the CWR until the end of the shift. Mr. Salazar stated that OIW swingshift would continue with the repair and take over with the post heat. The affected repair location will be post heated at 230° Celsius for approximately 2 hours. Final inspection of the CWR repair will be on 6/29/10. Items observed appear to be in general compliance with the applicable WPS and CWR# 27 specific instructions.

The QA Inspector was informed by OIW Project Manager Bill Pender that OIW Paint Dept will be ordering a new batch of Carbozinc 11HS to paint HPB 101A-3 and the remaining spare Fuses. This is due to the annual expiration (6/2010) of the primer currently in use to paint the spare Fuses and the HPB's. The QA Inspector informed Mr. Pender that upon receipt of the new batch of paint, the QA Inspector will need to batch sample the paint and send it in for acceptance testing at the Dept headquarters lab. Mr. Pender concluded by stating that he would notify the Paint dept of the requirements and inform the QA Inspector when OIW expects to receive the new paint. (Attached photos from this observation.)



Summary of Conversations:

As noted in the contents of this report.

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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:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
