

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-009883**Date Inspected:** 29-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**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 Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Base Assembly 102A-3:

a111-3 forging to a110-3 base plate

The QA Inspector intermittently monitored OIW welders Vincent Vu (WID V7) and Bounhoun Savahn (WID S74) during in progress Submerged Arc Welding (SAW) at weld joints W1-165 & W1-166 and W1-164 & W1-167 respectively. The referenced connections are Partial Joint Penetration (PJP) welds joining b106 gussets to b106 and ab106 gussets. The QA Inspector intermittently observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of completed root pass at weld joints referenced above. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT & 50% MT verification at weld joints W1-165 & W1-166 finding the root passes to be in general compliance with contract documents. Please reference TL-6028 report for this date for detailed information. The QA Inspector randomly observed as welders V7 & S74 deposited SAW root and fill passes in the horizontal (2F) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welders were maintaining continuous preheat utilizing a torch. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass

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temperature appeared to be in general compliance with the contract requirements -- (W1-165: 35 volts, 565 amperes, 432mm/min travel speed).

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-4 base plate

The QA Inspector intermittently monitored OIW welder Bui Liem (WID B10) during in progress Submerged Arc Welding (SAW) at weld joints W2-24 & W2-23 joining ab106 gusset to a109 cap plate and a110 base plate respectively. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of completed root passes at joint W2-23 referenced above. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT & 50% MT verification at the noted location finding the root pass to be in general compliance with contract documents. Please reference TL-6028 report for this date for details. The QA Inspector intermittently observed as welder B10 deposited SAW root and fill passes in the flat (1F) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing electric resistance cords and a torch. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements -- (W2-23: 35 volts, 565 amperes, 432mm/min travel speed).

OIW Vancouver, WA Paint Shop

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 fuse to a124-7 fuse

The QA Inspector noted that one OIW painter was engaged in blasting on 120A-1 prior to application of primer at interior of fuse.

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 5 OIW production personnel and 2 Quality Control Inspectors present on this date during swing shift.



Summary of Conversations:

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As noted in the body of the report.

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:	Henke,Clete	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer
