

**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-005618**Date Inspected:** 03-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1600**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon**CWI Name:** See below**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:**

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

**OIW Fabrication Shop-Bay 1:**

QA Inspector Brannon randomly observed OIW personnel and 1 helper continuing in Bay 1 at the CNC mill for facing hinge k pipe beam post tension cap plate (A825M) MK#a109 in preparation for welding.

**OIW Fabrication Shop-Bay 3:**

QA Inspector Brannon was informed by QC Inspector Mr. Salazar of (2) tack welds that had cracked joining ring stiffener plate MK#a125 to hinge k fuse half section MK#a124-6 weld joint WM#-09. QA Inspector Brannon observed welder Mr. Craig Jacobson remove the weld metal from the 2 area's by method of grinding. After removal of the weld metal QC Inspector Salazar and QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing (MT) on the excavation area and found no relevant indication in the base metal. See Caltrans Magnetic Particle Test Report TL-6028 dated March 03, 2009 for additional information.

QA Inspector Brannon randomly observed OIW qualified welder Mr. Craig Jacobson ID#J6 welding a joining ring stiffener plate MK#a125 (HPS 485 W) to hinge K pipe beam fuse half section A124-6 (HPS 485 W). The partial joint penetration (PJP) weld is identified as weld joint #WM3-09. Mr. Jacobson was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Mike Gregson and Mr. Jose Salazar verifying that the pre-heat and welding parameters were in accordance with

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the Welding Procedure Specification (WPS). Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS 4020 revision number 0.

### OIW Fabrication Shop-Bay 3:

QA Inspector Brannon randomly observed OIW personnel rough machining flat side of hinge k forging sections a111-2, and a111-4 (A508 Gr. 4N Class 2) in preparation for welding to hinge k base plate MK#a110.

### OIW Fabrication Shop-Bay 3 (arc strike base metal):

QC Inspector Jose Salazar informed QA Inspector Brannon that hinge K pipe beam section a124-6 has a submerged arc welding (SAW) arc strike on the ring stiffener base metal of MK#a125 (HPS 485 W). QC Inspector Salazar stated that OIW will submit a welding repair report (WRR-2244-04). QC Inspector Jose Salazar informed QA Inspector Brannon that hinge K pipe beam section a124-6 submerged arc welding (SAW) arc strike on the ring stiffener base metal of MK#a125 (HPS 485 W) had been removed by grinding.

QC Inspector Jose Salazar also stated that he performed visual inspection (VT) and magnetic particle testing (MT) on the excavation and found no relevant indications. QA Inspector Brannon measured the depth of excavation to be approximately 3.5mm. QA also, performed visual inspection (VT) and magnetic particle testing (MT) on the excavation area and found no relevant indications. See Caltrans Magnetic Particle Test Report, TL-6028 dated March 3, 2009 for additional information.

### Quality Assurance Inspection (VT/MT):

QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing (MT) on tubular fuse a124-10, a124-11, a124-12, a124-13, a124-14 and a111-1 complete joint penetration weld and a124-6 ring stiffener root pass. See Caltrans Magnetic Particle Test Report TL-6028 dated March 03, 2009 for additional information.

### Quality Assurance Inspection (UT):

QA Inspector Vance performed ultrasonic testing (UT) on tubular fuse a124-10, a124-11, a124-12, a124-13, a124-14 and a111-1 complete joint penetration welds. See Caltrans Ultrasonic Test Report TL-6027 dated March 03, 2009 for additional information.

### Material, Equipment, and Labor Tracking:

QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 4 Quality Control and 6 production personnel on this date.

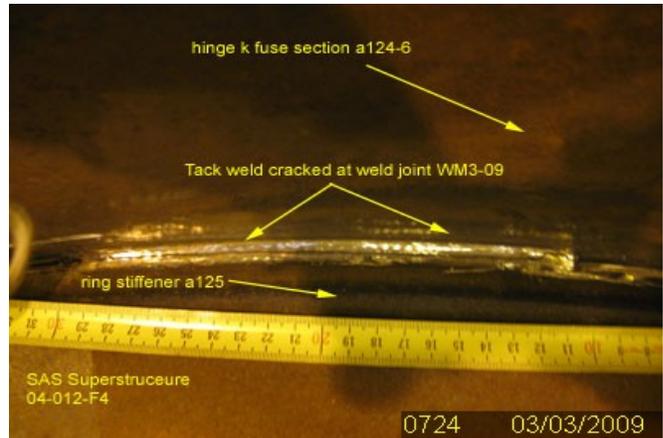
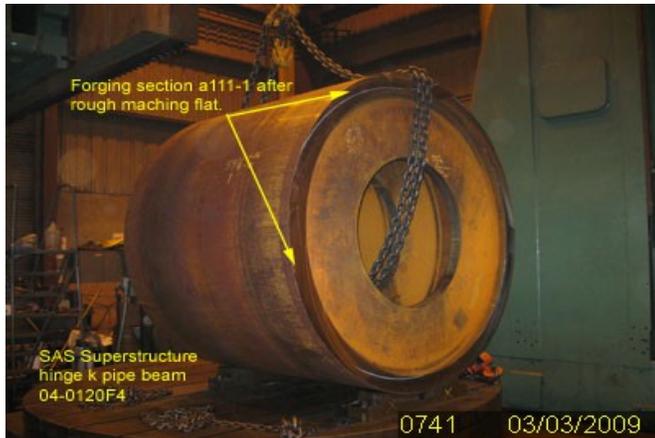
The following digital photograph below illustrates observation of the activities being performed.

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## Summary of Conversations:

AS stated within this reprot.

## 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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<b>Inspected By:</b>	Brannon, Sherri	Quality Assurance Inspector
<b>Reviewed By:</b>	Adame, Joe	QA Reviewer

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