

**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-003511**Date Inspected:** 14-Aug-2008**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, Oregon**CWI Name:** Greg Roberts**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:**

On this date, Caltrans Quality Assurance Inspector (QA) Danny C. White (B89) was present at Oregon Iron Works (OIW) for the purpose of monitoring fabrication and welding operations of the Hinge K Pipe Beam at the OIW fabrication and welding shop in Clackamas, Oregon.

The QA Inspector met with OIW Welding Engineer Mr. Greg Roberts and observed a stainless steel overlay repair procedure was performed by OIW Welding Operator Mr. Craig Jacobsen, welder identification (WID) J6. The QA Inspector observed Mr. Jacobsen utilized a water cooled Lincoln Precision Tig 275 welding machine with argon gas at approximately 35 cubic feet per minute and performed the following gas tungsten arc welding (GTAW) test.

The QA Inspector observed Mr. Jacobsen deposit (38) weld passes in the flat position onto what appeared to be a tubular section remnant of the stainless steel Electro-slag overlay procedure qualification test previously performed. See photo below for additional information. The QA Inspector observed that Mr. Jacobson utilized 2.4 millimeter (mm) diameter Radnor 309L electrodes and deposited (16) weld passes during the first weld layer. The QA Inspector then observed Mr. Jacobsen utilized 2.4 mm diameter Harris 316L electrodes and deposited (14) weld passes for the second weld layer and (8) weld passes for the third layer.

The QA Inspector observed Mr. Roberts as he monitored welding parameters. The QA Inspector verified the parameters that Mr. Roberts recorded utilizing his Fluke 337 True RMS Clamp Meter and a stop watch. For specific welding parameters recorded during this PQR see Caltrans Welding Witness Report, TL-6032 generated upon completion of this test.

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# WELDING INSPECTION REPORT

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At approximately 1430 the QA Inspector observed that the water cooling system of the Lincoln welding machine mentioned above began to leak and the QA Inspector was informed that the above mentioned test would be postponed until the machine could be repaired.



## Summary of Conversations:

The QA Inspector asked Mr. Roberts for verification of the electrodes and shielding gas certifications mentioned above. Mr. Roberts informed the QA Inspector that he would try and locate the certifications when possible. The QA Inspector also informed Mr. Roberts that metric measurements are required for this job and the QA Inspector observed that all of the welding parameters recorded by Mr. Roberts were in english. Mr. Roberts informed the QA Inspector that the test results would submitted in metric.

## 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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	White,Danny	Quality Assurance Inspector
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<b>Reviewed By:</b>	Wright,Mark	QA Reviewer
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