

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-004140**Date Inspected:** 16-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon**CWI Name:** Scott Reed**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 (QA) Inspector Danny C. White (B89) was present at Oregon Iron Works (OIW) for the purpose of monitoring procedure qualification record tests for the Hinge K Pipe Beam at the OIW fabrication and welding shop in Clackamas, Oregon.

The QA Inspector met with Quality Control (QC) Inspector Mr. Scott Reed and Mr. AJ Blair and observed the gas tungsten arc welding (GTAW) stainless steel overlay repair procedure known as SSCS-010 was completed by OIW Welding Operator Mr. Craig Jacobsen, welder identification (WID) J6. It is noted that the above mentioned test was started the previous day. After preheating Mr. Jacobsen deposited (5) weld passes utilizing 316L 2.4 millimeter (mm) electrodes completing the second layer and deposited (13) weld passes utilizing the same electrodes completing the third layer. The above mentioned repair procedure was completed this day and a total of (35) weld passes were deposited onto SSCS-010 test procedure during both days. The QA Inspector assigned Lot #B89-047-08 as witness to this test. Please see the TL-6032 applicable to this test completed this day for additional information.

Following the above mentioned GTAW test the QA Inspector observed the stainless steel overlay repair procedure known as SSCS-011 was performed by Mr. Jacobsen. The QA Inspector observed Mr. Jacobsen utilized Lincoln welding machine with carbon dioxide gas at approximately 35 cubic feet per minute and performed the following flux cored arc welding (FCAW) test.

The QA Inspector observed Mr. Jacobsen deposit (26) 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

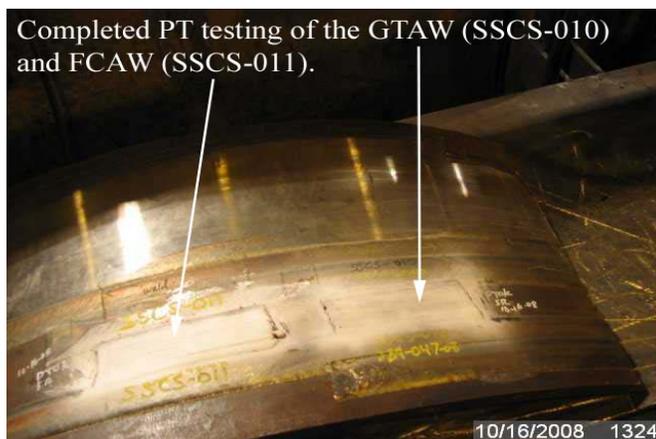
WELDING INSPECTION REPORT

(Continued Page 2 of 3)

performed. The QA Inspector observed that Mr. Jacobson utilized 1.6 millimeter (mm) diameter Lincoln Blue-Max 309L electrodes and deposited (9) weld passes during the first weld layer. The QA Inspector then observed Mr. Jacobsen utilized 1.6 mm diameter Lincoln Blue-Max 316L electrodes and deposited (8) weld passes for the second weld layer and (9) weld passes for the third layer which completed this test. It is noted that the QA Inspector was presented with copies of the material test report (MTR), a certificate of conformance (COC) for the 309L and 316L electrodes as well as a COC for the Carbon-Dioxide shielding gas. The QA Inspector assigned Lot #B89-048-08 as witness to this test. For specific welding parameters recorded during this PQR see Caltrans Welding Witness Report TL-6032 applicable to this test generated upon completion of this test.

The QA Inspector observed Mr. Reed and Mr. Blair as they monitored welding parameters for the above mentioned tests. The QA Inspector verified the parameters utilizing his Fluke 337 True RMS Clamp Meter and a stop watch.

The QA Inspector observed that after the test specimens had cooled Mr. Reed performed die penetrant testing (PT) on the samples and informed the QA Inspector that he had did not observe any relevant rejectable indications and accepted the items. The QA Inspector performed a random examination of the specimens after Mr. Reed had accepted them and items observed appeared to be in conformance with contract requirements. Please see the photo below for additional information.



Summary of Conversations:

The QA Inspector informed OIW that metric measurements are required for this job and the QA Inspector observed that all of the welding parameters recorded were in english. OIW personnel informed the QA Inspector that the final test results would be converted and 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.

Inspected By: White, Danny

Quality Assurance Inspector

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Reviewed By: Adame,Joe

QA Reviewer