

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028177**Date Inspected:** 13-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job site**CWI Name:** Salvador Merino**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:** OBG**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Rodney Patterson was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:  
Ultrasonic Testing (OBG Deck)

This QA performed verification Ultrasonic Testing (UT) on Complete Joint Penetration (CJP) transverse splice weld between lift 12 and 13 west. The weld was tested in way of repairs for UT rejects that were discovered by the QAI on 08-07-2012. The repairs have been previously tested and accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QAI's findings are as follows;

Weld# 12E/13E-A5 at Y=1180 No rejectable indications found at the time of inspection.

Weld# 12E/13E-A5 at Y=3280 No rejectable indications found at the time of inspection.

The QAI observed at random intervals ABF/JV qualified welder Wai Kitlai #2953 performing Carbon Arc Gouging (CAG) for the repair of the deck panel drop-in splice designated as 13E-E2.8. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavation at locations Y=11160 and is a fourth time repair with reference to the ABF QC Ultrasonic Testing report.

The ABF qualified welder then proceeded to perform Shielded Metal Arc Welding (SMAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair. The weld and surrounding area was brought to temperature by the use of inductions heaters and maintained throughout welding.

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The fourth time repairs at Y=11160 were performed without the prior approval of the engineer. The QA task leader was notified in writing of the non-compliant issue for further discussion with the Caltrans Structural Materials Representative (SMR) and ABF Management.

The QAI was notified by ABF/JV QC inspector Salvador Merino that the lifting lug removal areas on the E3 longitudinal diaphragm south side at panel point 121.5 and panel point 119.5 were completed and ready for QA verification. The results of the inspections are as follows.

### Panel Point 121.5 E3 longitudinal diaphragm

The QA random visual inspection at the lifting lug removal area was performed at this location and appeared to comply with ABF-RFI-001151R00. The QC and QA verification Magnetic particle testing of the removal areas was performed on a previous shift.

### Panel Point 119.5 E3 longitudinal diaphragm

The QA visual inspection at the lifting lug removal area was performed at this location and measurements taken on the required 3/1 slope of the removal area did not comply with ABF-RFI-001151R00 and Magnetic particle testing of the removal areas had not been performed at this location. The ABF/JV QC inspector Salvador Merino then proceeded to perform magnetic particle testing (MT) of the lifting lug removal area and observed multiple transverse linear indications ranging from 5mm~30mm on the remaining lug attachments. Further repair and inspection will be required at this location at a later date.

The QAI observed ABF/JV qualified welder Wai Kitlai #2953 performing Carbon Arc Gouging (CAG) for the repair of the deck panel drop-in splice designated as 13E-PP122.2. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavation at the following locations, Y=4830 third time repair.

The ABF qualified welder was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair. The weld and surrounding area was brought to temperature by the use of inductions heaters and maintained throughout welding. The third time repairs at Y=4830 were performed without the prior approval of the engineer. The QA task leader was notified in writing of the non-compliant issue for further discussion with the Caltrans Structural Materials Representative (SMR) and ABF Management.

The QAI spent a portion of this shift reviewing and documenting the status and completion of various production welding tracking logs for lift 13W/14W and 13E-14E drop-in deck work currently in-process. The QA recorded the information on the OBG tracking log.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### **Summary of Conversations:**

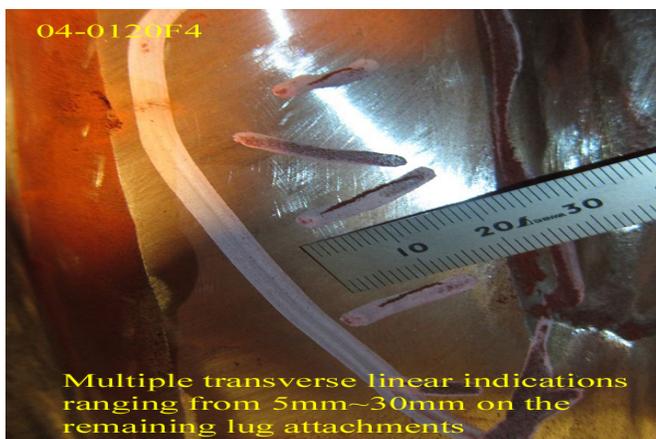
As noted above

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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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Patterson,Rodney

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer