

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016466**Date Inspected:** 23-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** John Pagliero**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 Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint E5/E6-D1 and D2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) had removed the backing strap and were in the process of back gouging the weld.
- 2) At weld joints E2/E3 - LS-2, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was using the Shielded Metal Arc Welding (SMAW) process. QC Inspector John Pagliero was present.
- 3) At weld joints E2/E3 - LS-4, inside the OBG section: ABF welding personnel James Zhen (#6001) was using the SMAW process. QC Inspector John Pagliero was present.
- 4) This QA Inspector performed a walk through OBG sections E4/E5 and E5/E6 to verify the status of QC and QA inspections. Please see below for details.

At weld joint E5/E6-D1 and D2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) had removed the backing strap and were using a plasma arc torch to back gouge the weld.

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At weld joints E2/E3 - LS-2, inside the OBG section this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) using the SMAW process on the groove section of the weld joint. This QA Inspector observed QC Inspector John Pagliero verify the following welding parameters; 123 amperes using a 3.2 mm diameter E9018H4R electrode. This QA Inspector also observed QC Inspector John Pagliero verify the preheat temperature of the base metal was greater than 100°C prior to the start of welding. The work observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1012-3.

At weld joints E2/E3 - LS-4, inside the OBG section this QA Inspector observed ABF welding personnel James Zhen (#6001) was using the SMAW process on the groove section of the weld. This QA inspector performed a random verification of the welding parameters and observed the following; 130 amperes using a 3.2 mm diameter E9018H4R electrode. This QA Inspector also verified the temperature of the base material was greater than 100°C using a temperature indicating marker. The work observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1012-3. This QA Inspector randomly observed QC Inspector John Pagliero verify the preheat and monitor the work at this location.

This QA Inspector performed a walk through OBG sections E4/E5 and E5/E6 and the Longitudinal Stiffeners (LS) at E1/E2 to verify the status of QC and QA inspections. Please see below for details.

### OBG section welds at E4/E5

A1 thru A5 – QC and QA inspections complete\*

B1 – Waiting for QC to perform initial UT inspection

C1 and C2 – QC completed initial UT inspection, 16 areas marked on weld for repair, ABF currently not working

D1 and D2 – QC and QA inspections complete\*

E1 and E2 - QC completed initial UT inspection, 3 areas marked on weld for repair, ABF currently not working

F1 - QC and QA inspections complete\*

### OBG section welds at E5/E6

A1 thru A5 – QC and QA inspections complete\*

B1 - Waiting for QC to perform initial UT inspection

C1 and C2 – QC UT inspection in progress, approximately 80% done (no UT performed this date)

D1 and D2 – Welding in progress – back gouging outside of weld joint

E1 and E2 – In as welded condition, ABF currently not working

F1 - Waiting for QC to perform initial UT inspection

### Longitudinal Stiffeners (LS) at E1/E2

LS-1,2 and 3 - QC and QA inspections complete\*

LS-4, 5 and 6 - QC and QA inspections complete\*

Please note: \* indicates the basic production weld inspection and is not intended to include additional specific items, such an example would be the UT inspection of the transition welds between the backing straps on “A” welds and the base material.

### Summary of Conversations:

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As noted above.

## **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>	Hager,Craig	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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