

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-030067**Date Inspected:** 20-Sep-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Scott Kortum**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:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QA) Joe Adame arrived at the American Bridge/Fluor (ABF) JV job site between the times noted above in order to monitor ABF Quality Control activities and the in process work being performed by ABF production personnel. The following items were observed:

ESW Repair Welding/Excavation

RWR-201308-002

ESW N-043, Location "P"-Face A,B:

The QA Inspector observed ABF welder Donald Plumb (WID-0891) performing Shield Metal Arc Welding (SMAW) on the repair excavation of Electroslag Weld (ESW) "P" Face A @ Original Y-1330mm. Location of the repair is as follows:

(Y=1270mm~1470mm) L-270mm, W= 50mm, D= 55mm.

The welding process in use was Shielded Metal Arc Welding (SMAW) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding electrode observed was 4.0mm diameter electrode (E7018-1 HR4). ABF QC Inspector Scott Kortum performed welding parameters verifications at random intervals throughout the shift and also verified that preheat was over 300° F. with Tempilstik temperature indicator. The QA Inspector later observed that WID-0891 had completed the SMAW weld repair at this location and the weld repair was in the un-ground condition. The welder relocated to Face "B" at this Y location on this weld ("M", Y-4400mm) to commence air carbon arc gouging of the other face since a planar indication was observed in the original excavation on Face A. The repair will be performed at both faces of the ESW weld at this Y location to remove all possible remnants of the planar indication observed (centerline crack) and the original ESW weld. Mr. Plumb excavated Face "B" @ Y-4400 to approximately 20 mm depth and 300mm long with no indications

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observed by the QC/QA Inspectors. Excavation work at this location expected to continue on 9-21-13.

ESW Repair excavation

RWR-201308-009

ESW W-042, Location "M"-Face B:

The QA Inspector observed ABF welder Mike Jimenez (WID-4671) performing excavation of ESW "M" at Face B, Y= 4400mm to verify indications observed during Ultrasonic Testing with pulse/echo & pitch/catch. Mr. Jimenez was performing the excavation using an air carbon arc gouging and a grinder. Mr. Jimenez was instructed by ABF QC Inspector Scott Kortum to notify him when indications are visible to allow QC/QA time to inspect the excavation. The repair location was noted as:

Weld excavated at: D=30mm- No indications observed.

Weld excavated at: D=50mm- No indications observed.

Excavation Length: (Y-4210mm~4450mm) L=340mm

W-47mm

D-54mm

After grinding to bright metal the QC Inspector performed Magnetic Particle Testing (MT) of the final excavation. The QC Inspector stated the excavation appears to be free of discontinuities and he would complete ABF daily inspection report and magnetic particle testing report to detail the findings. ABF Field Engineer Eric Blue informed the QA Inspector that he had given approval to commence the repair welding at this location. The QA Inspector also performed an MT verification of the final excavation. See TL-6028 for additional details on items inspected on this date. Mr. Jimenez was later observed setting up the Miller ProHeat 35 induction blankets at the repair location in preparation for SMAW of the repair excavation.



## Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

## 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 Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Adame,Joe	Quality Assurance Inspector
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<b>Reviewed By:</b>	Riley,Ken	QA Reviewer
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