

**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 #: 01.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029929**Date Inspected:** 21-Aug-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

<b>CWI Name:</b>	Jesus Cayabyab & Bernie Docena			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	See Below		

**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Edward Leach was at the American Bridge/Flour (ABF) job site at Yerba Buena Island between the times noted above in order to monitor Smith Emery Quality Control (QC) functions and the in process work being performed by ABF personnel. The following items were observed:

**Tower Skirt Ring Beam South Shaft**

The QAI periodically observed ABF welding personnel Gue Wu Chen utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 HR4, 1/8" diameter electrode to complete welding for side A of the Complete Joint Penetration (CJP) joint. As welding continued the QAI verified welding parameters at approximately 138 amperes per Welding Procedure Specification (WPS) ABF-WPS-D1.5-1020, Rev1. The welder was also observed using proper interpass cleaning methods with a slag hammer and a wire brush. QC Inspector Bernie Docena was monitoring the work at this location on this date. Once the welding was complete the welder was in the process of grinding the weld on side A flush and preparing the weld joint for Ultrasonic Testing (UT) examination.

**RWR201308-004****ESW S-043, Location "T" Face B**

The QAI periodically observed ABF welding personnel Mike Jimenez utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 H4R, 5/32" diameter electrode to begin welding excavation for weld repair. The welding is taking place on the exterior (west) side at joint T, weld #S-043 #13 on Face B side for a repair designated as 201308-004. Excavation dimensions are noted as Y=3000mm-3360mm, Length=360mm, Width=80mm, Depth=74mm. The QAI observed the interpass

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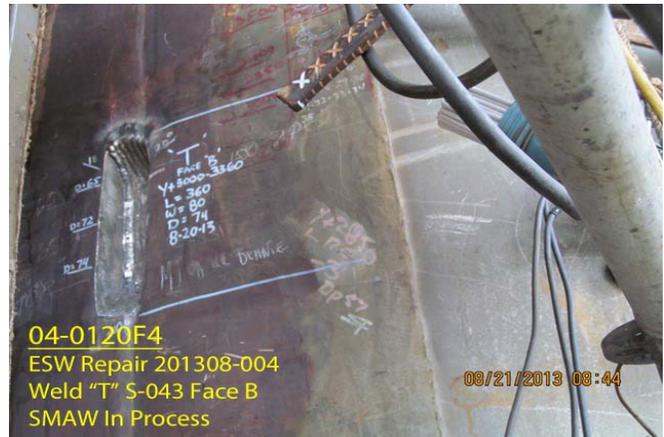
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temperature was maintained at approximately 360 degrees Fahrenheit with electric heating coil blankets through a heat induction system and a rose bud torch. The QAI verified interpass temperature with a thermal heat gun. As welding continued the QAI periodically verified welding parameters at approximately 140 amperes per ABF-WPS-D1.5-ESW-80-100TR. The welder was also observed using proper interpass cleaning methods with a slag hammer and a wire brush. QC Inspector Jesus Cayabyab was monitoring the progress of this repair on this date.

## Tower Skirt Ring Beam West Shaft

The QAI periodically observed ABF welding personnel Rick Chounard at the above location utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 HR4, 1/8" diameter electrode to complete in process welding for side A of Complete Joint Penetration (CJP) joint splice weld. As welding continued the QAI verified welding parameters at approximately 145 amperes per Welding Procedure Specification (WPS) ABF-WPS-D1.5-1020, Rev1. The welder was also observed using proper interpass cleaning methods with a slag hammer and a wire brush. Once welding was complete ABF moved tower ring beam away from tower face to provide access to side B for back gouge. The QAI later observed QC Inspector Bernie Docena perform Magnetic Particle Testing (MT) examination on the weld groove after back gouging and prior to welding. No relevant indications were noted and SMAW welding proceeded on side B. The QAI and QC Inspector also performed visual weld inspection on fillet & Partial Joint Penetration (PJP) welds. The QC Inspector marked up several visual discrepancies for repair by welding and grinding. These areas were addressed by ABF personnel, later re-evaluated and accepted by QC Inspector Bernie Docena.



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## Summary of Conversations:

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>	Leach,Ed	Quality Assurance Inspector
<b>Reviewed By:</b>	Reyes,Danny	QA Reviewer

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