

**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-030040  
**Date Inspected:** 13-Sep-2013

**Project Name:** SAS Superstructure  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 700  
**OSM Departure Time:** 1730  
**Location:** Job Site

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

RWR-201308-002

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

The QA Inspector observed ABF welder Wai Kit Lai (WID-2953) performing Shield Metal Arc Welding (SMAW) on the repair excavation on Electroslag Weld (ESW) "P", at face A. The locations and repair information are listed in Request for Weld Repair (RWR) 201308-002 from Ultrasonic Testing indications designated for repair. The repair locations were noted as:

(Y=3630mm~3900mm) L-280mm

W= 65mm

D= 50mm

Prior to welding, Mr. Lai was observed preheating the weld to over 350° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets and a propylene torch. The welder was using 4.0mm diameter electrode (E7018-1 HR4) per ABF Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3. The welding process in use was the Shielded Metal Arc Welding process (SMAW). The welding parameters were verified by ABF QC Inspector Bernie Docena with a Fluke 337 current Clampmeter and preheat was verified with temperature indicators. The QC Inspector performed welding parameters verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

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ESW Repair excavation

RWR-201308-004

ESW S-043, Location "T"-Face A:

The QA Inspector observed ABF welder Mike Jimenez (WID-4671) performing excavation of ESW "T" at Face A, Y's= 3090mm,3110,3125,3170,3190 to verify indications observed during Ultrasonic Testing 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 Bernie Docena to notify him when indications are visible to allow QC/QA time to inspect the excavation. This repair is being performed from Face A due to rejectable planar indications that were observed & removed on Face B. The repair locations were noted as:

Excavation Length (Y=3000mm~3480mm) L=480mm

W=75mm

D=40mm

After grinding to bright metal the QC Inspector performed MT testing of the 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. 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 Shielded Metal Arc Welding (SMAW) of the repair excavation

Incident Report 9-13-13

ESW W-043, Location "V"-Face B:

On the date the QA Inspector observed that ABF Painting Subcontractor Certified Coatings had applied inorganic zinc primer to the exterior of Tower Electroslag Weld (ESW) "V"-W-043 prior to the welds being final inspected & accepted by ABF QC. Per the Contract Special Provisions section 8-3.01- "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents." Information regarding the Incident Report was forwarded to Lead Inspector Ken Riley for distribution. See TL-15 Quality Assurance Incident Report for additional details on items observed in non-compliance on this date.



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**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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