

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-029937**Date Inspected:** 24-Aug-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Jesse 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>	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 excavation

RWR-201308-003

ESW E-043, Location "Q"-Face A:

The QA Inspector was later present to observe ABF welder Donald Plumb (WID-0891) performing Shield Metal Arc Welding (SMAW) of the repair excavation on Electroslag Weld (ESW) "Q", at face B. Locations are listed as detailed in Request for Weld Repair (RWR) 201308-003 from Ultrasonic Testing indications designated for repair.

The repair locations were noted as:

Y= 3800mm~4300mm

L= 500mm

W= 80mm

D= 70mm

Prior to welding, Welder -0891 was observed preheating the weld to over 300° Fahrenheit prior to welding using the Miller ProHeat 35 with heat induction blankets. 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 parameters were verified by ABF QC Inspector Bernie Docena with a Fluke 337 current clampmeter and preheat was verified with temperature indicators. Mr. Docena performed welding parameters verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

Welder 0891 halted welding at this location to assist with work being performed for ABF RFI-003457R00 (See below).

## Diaphragm plate Removal

@ ESW E-043, Location "Q"-Face B:

ABF-RFI-003457R00

The QA Inspector was present to observe ABF welder Wai Kit Lai (WID-2953) performing work to remove a predetermined section of 9m Diaphragm plate as per ABF Request for Information (RFI) -003457R00. The RFI describes that due to access constraints, ABF could not complete a weld repair on Weld "Q" (E-043), Face B. ABF QC had previously discovered an MT indication present in the current excavation (below the 9m diaphragm) and UT had also detected the indication to be present above the 9m diaphragm. ABF proposed to remove the section of the 9m diaphragm to obtain access for excavation and completion of this repair. After the ESW repair is completed and determined to be UT acceptable, a new 9m diaphragm plate will be replaced and PJP welded to the existing 9m diaphragm and tower skin. The Departments response was that they take no exception to the Contractor's proposal for removal and repair of the 9m Diaphragm to provide access for the repair of the referenced Weld Q (E-043). The fill plate shall be the same grade and thickness (45 mm) as the diaphragm plate, with an effective 36 mm PJP perimeter weld.

Mr. Lai was observed preheating the Diaphragm with a rosebud torch to approximately 200° Fahrenheit. The Welder was later observed cutting the diaphragm plate with a propylene torch at the layout location marked and punched on the plate. Mr. Lai was assisted by ABF welder Donald Plumb (wid-0891) with securing and extracting the piece without additional damage to the adjacent material. ABF QC Inspector Jesse Cayabyab stated that on 8/26/13 Mr. Lai will grind the flame cut surface of the Diaphragm section with the existing hole so ABF QC can MT inspect the area for discontinuities. The weld repair of ESW "Q", Face B at the 9m location will be performed once ABF has been given approval to proceed.



## Summary of Conversations:

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

## Comments

---

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

---

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.

---

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

---