

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029976**Date Inspected:** 03-Sep-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**CWI Name:** Bernie Docena**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 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) on the repair excavation on Electroslag Weld (ESW) "Q", at face A. The locations and repair information are listed 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, Mr. Plumb was observed preheating the weld to over 350° 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 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.

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Repair welding at this location at this location is approx. 85% complete. The welding observed appeared to be in compliance with the WPS noted above.

Tower Skirt Ring Beam East Shaft

The QA Inspector observed ABF welding personnel Kit Lai (WID-2953) performing welding on Tower skirt Ring Beam using the Shielded Metal Arc Welding (SMAW) process in the vertical (3G,3F) and horizontal (2F) positions with E7018-1 HR4, 1/8" diameter electrode. The weld joints are identified as #164 fillets, #165 PJP & #166 CJP. At the start of the shift the welder was observed using a hand held propylene torch to preheat the welds and adjacent areas to 150°Fahrenheit or above. 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. Lai was performing the work to using Welding Procedure Specifications (WPS) ABF-WPS-D1.5-1020A- Rev1, ABF-WPS-D1.5-F1200A- rev 2 and ABF-D1.5-1160. The welding observed appeared to be in compliance with the WPS's mentioned above.

Diaphragm Repair

ABF-RFI-003457R00

RWR-201306-002

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

The QA Inspector observed that ABF have received replacement diaphragm material to complete the repair at the 9m location adjacent to ESW "Q" Face B. Per approved RFI 003457R00, the contractor removed the Elevation 9m Diaphragm to provide access for the repair of ESW Weld "Q" (E-043). The QA Inspector spoke to Tower SMR Aaron Prchlik to inquire of the replacement plate material had been verified and approved. Mr. Prchlik stated that the plate was verified upon receipt at the jobsite warehouse and is acceptable for installation. ABF QC Inspector Bernie Docena stated that the fill plate material is the same grade and thickness (45 mm) as the original diaphragm plate that was removed. Mr. Docena also stated that ABF would trace a template of the existing hole and cut the plate to the required size. Currently the existing hole at the 9m elevation has been ground and Magnetic particle tested by ABF QC with no relevant indications observed.



Summary of Conversations:

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

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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.

Inspected By:	Adame,Joe	Quality Assurance Inspector
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Reviewed By:	Mertz,Robert	QA Reviewer
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