

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 #: 01.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029918**Date Inspected:** 15-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

CWI Name:	Jesus Cayabyab & 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:** 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

The QAI periodically observed ABF welding personnel Gao Wu Chin 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 the Complete Joint Penetration (CJP) field splice on the tower skirt ring beam on north CD Corner of the north shaft. At this time the QAI observed the welder was in the process of completing cover passes on side A. As welding continued the QAI verified welding amperage at approximately 138 amperes. Several verifications of this reading were made throughout the day with similar readings. The QAI verified Welding Procedure Specification (WPS) ABF-WPS-D1.5-1020, Rev1 and ABF-WPS-D1.5-1160 for compliance. Later in the shift ABF used a hoisting device to move ring beam section away from the tower to provide access for the welder to back gouge side B of the CJP weld. Welder Gao Wu Chin performed back gouging on side B. 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.

ESW Weld Repair "F"

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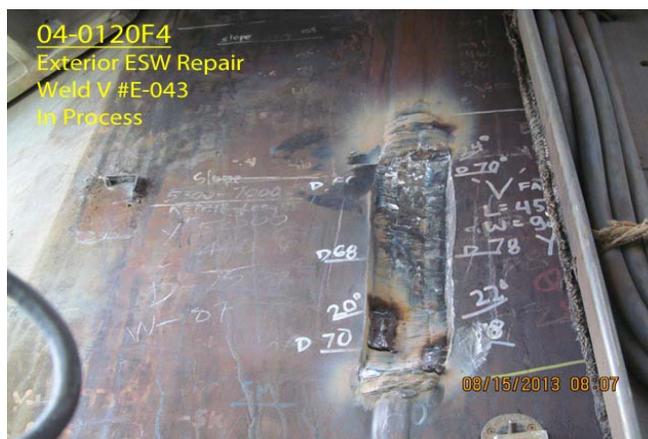
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The QAI periodically observed ABF welding personnel Wai Kit Lai utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 H4R, 1/8" diameter electrode to weld excavation for a weld repair. The welding is taking place in the inner chamber between the north & east shaft at joint F, weld #E-045 on Face A side for a repair designated as 201307-004. Excavation dimensions are noted as Y=8670mm-9090mm, Length=420mm, Width=60mm, Depth=28mm. The welder was observed welding cover passes on this date. The QAI observed the interpass temperature was maintained at approximately 375 degrees Fahrenheit with electric heating coil blankets through a heat induction system. As welding continued the QAI periodically verified welding amperage at approximately 130 amperes. Several verifications of this reading were made throughout the day with similar readings. The Welding Procedure Specification (WPS) designated for this repair was identified as ABF-WPS-D1.5-1000Repair, Rev.3. QC Inspector Bernie Docena was monitoring the progress of this repair on this date. The weld repair was completed on this date and ground flush by the end of the shift. Ultrasonic Testing (UT) is pending.

ESW Weld Repair "V"

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, 1/8" diameter electrode to weld excavation for a weld repair. The welding is taking place on the exterior (west) side at joint V, weld #E-043 #14 on Face B side for a repair designated as 201305-009. Excavation dimensions are noted as Y=5000mm-5450mm, Length=450mm, Width=90mm, Depth=78mm. The welder was observed applying filler and cover passes on this date. The QAI observed the interpass temperature was maintained at approximately 410 degrees Fahrenheit with electric heating coil blankets through a heat induction system. As welding continued the QAI periodically verified welding amperage at approximately 128 amperes. Several verifications of this reading were made throughout the day with similar readings. The Welding Procedure Specification (WPS) designated for this repair was identified as ABF-WPS-D1.5-1000Repair, Rev.3. QC Inspector Bernie Docena was monitoring the progress of this repair on this date.

The welding & workmanship observed on this date appeared to be in general compliance with the contract specifications. The following pictures below detail some of the observations made on this date.



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Summary of Conversations:

General conversations with ABF/JV QC NDT personnel relevant to work 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.

Inspected By:	Leach,Ed	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
