

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-029902**Date Inspected:** 13-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:** Bernie Docena, Jesse Cayabyab**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 functions and the in process work being performed by ABF production personnel. The following items were observed:

In Process Visual Inspection

RWR201307-008

ESW E-045, Location "F"-Face A

The QA Inspector observed ABF welder Don Plumb (WID-0891) performing Shield Metal Arc Welding (SMAW) of the repair excavation on Electroslag Weld (ESW) "F", at face A. Locations are listed as detailed in Request for Weld Repair (RWR) 201307-008 from Ultrasonic Testing indications designated for repair. Repair locations were noted as:

Y= 650~840mm

L= 40mm

W= 55mm

D= 40mm

Prior to welding, the welder 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 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)

In Process Visual Inspection

RWR201305-009

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

The QA Inspector observed ABF welder Mike Jimenez (WID-4671) performing Shield Metal Arc Welding (SMAW) of the repair excavation on Electroslag Weld (ESW) "V", at face B. Locations are listed as detailed in Request for Weld Repair (RWR) 201305-009 from Ultrasonic Testing indications designated for repair. Repair locations were noted as:

Y= 5000~5400mm

L= 450mm

W= 90mm

D= 78mm

Prior to welding, the welder 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 Mr. Docena using a Fluke 337 current clampmeter and preheat was verified with temperature indicators. QC performed welding variable verifications at random intervals throughout the shift. The welding observed appeared to be in compliance with the WPS noted above.

NDT Inspection of Electroslag Welds (ESW)

RWR-201308-003

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

The QA Inspector observed ABF QC Inspector Jesse Cayabyab performed Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as ESW "Q" at face A. Mr. Cayabyab stated that he was instructed by ABF to perform pulse echo UT to document the depths and indications prior to repair (pre-repair verification). The areas will be reinspected after SMAW repairs. The original Y locations were indications identified with pitch/catch UT as rejectable or recordable and designated to be removed and repaired. Y Locations were noted as – 2550mm, 3470mm, 3495mm, 3980mm and additional HAZ areas located 300mm above and below the prosed repair locations.

QC/QA did not observe any rejectable indications with pulse echo UT.

QC/QA observed eight recordable indications with pulse echo UT.

QA also performed UT of the above mentioned ESW location in accordance with the ABF approved supplemental procedure for confirmation and evaluation of planar type defects. Tandem report for work performed on this date will be completed by QC Inspector Jesse Cayabyab and signed by both QA/QC parties. Items listed on tandem report reflect indications agreed upon by QA/QC. See TL-6027 for additional details on the items inspected on this date.

In Process Visual Inspection

RWR201306-002

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

The QA Inspector was informed by ABF QC Inspector Bernie Docena that during repair excavation on Electroslag Weld (ESW) "Q", at face A, QC had discovered a crack in the excavation under the diaphragm. The QC Inspector stated that that the indication was verified with UT and appears to run into the diaphragm an additional 20mm.

This repair was previously performed on (8/09/13) and is currently on hold until ABF propose a corrective procedure to remove and repair the location. Y locations was noted as:

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Y= 5820mm~5940mm

L= 120mm

W= 20mm

D= 10mm

ABF Field Engineer Eric Blue stated that ABF may possibly propose to cut a cope hole in the diaphragm to aid in removing and repairing the defect and gain access for the repair. No other work will be performed at this location until CT METS are allowed time to review and approve the repair procedure.



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.

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