

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-030082**Date Inspected:** 02-Oct-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 activities and the in process work being performed by ABF production personnel. The following items were observed:

ESW Repair Welding

RWR-201308-007

ESW N-042, Location "J"-Face B:

The QA Inspector observed ABF welder Rick Clayborn (WID-2773) performing Shield Metal Arc Welding (SMAW) on the repair excavation of Electroslag Weld Electroslag Weld (ESW) "J" Face B. The Original Y's are listed as = 3460mm, 3480mm, 3550mm, 3570mm.

Location of this repair is as follows: Excavation length (Y-3380mm~3780mm) L-400mm, W-60mm, D-40mm.

Prior to welding, Mr. Clayborn was observed preheating the weld to over 300° Fahrenheit 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 SMAW process. ABF QC Inspector Bernie Docena performed welding parameters verifications and checked preheat at random intervals throughout the shift. The QA Inspector also verified the preheat with a 300° F. temperature indicator. Mr. Docena also stated that since the original indication observed appeared to be a planar indication (centerline crack); the repair will be performed at both faces of the ESW weld at this Y location to remove the original ESW weld. Welding was completed at Face B at this location on this date.

Ultrasonic Testing of Electroslag Welds (ESW) Pre-Repair verification

WELDING INSPECTION REPORT

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ESW S-042, Location "L"- Face A, B:

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 "L" at face A, B. 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). This location is an added repair per agreement with CT and the contractor. The original Y locations were indications identified with pitch/catch UT as rejectable or recordable and designated to be removed and repaired.

Y Location was noted as -6940mm mm and HAZ areas located 300mm above and below the prosed repair locations.

QC/QA observed one recordable indication with pulse echo UT.

The QA Inspector also performed UT of the above mentioned ESW location in accordance with the ABF approved supplemental procedure for confirmation and evaluation of planar 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. The areas will be reinspected after SMAW repairs. See TL-6027 for additional details on the items inspected on this date.

ESW Repair Welding

RWR-201308-009

ESW W-042, Location "M"-Face A:

The QA Inspector observed that ABF welder Mike Jimenez (WID-4671) had completed Shield Metal Arc Welding (SMAW) on the repair excavation of Electroslag Weld (ESW) "M" (Face A) @ Original Y's-5670mm, 5700mm & 5720mm. The repair excavation dimensions were: Excavation length (Y-5500mm~5850mm) L-350mm, W-60mm, D-46mm. Mr. Jimenez was observed performing the post heat stress relief with the Miller ProHeat 35 heat induction system. The temperature will be taken down from 350° Fahrenheit with a minimum 3 hr. cool rate at 75° F an hour max rate. ABF QC Inspector Bernie Docena also stated that once the weld is ground flush and the 48hr cooling time is met, ABF QC will perform final inspections at this repair location.

ESW Repair excavation

RWR-201308-009

ESW W-042, Location "M"-Face B:

The QA Inspector later observed ABF welder Mike Jimenez (WID-4671) performing excavation of ESW "M" at Face B, Y= 9300mm to verify indications observed during Ultrasonic Testing with 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 Jesse Cayabyab to notify him when indications are visible to allow QC/QA time to inspect the excavation.

The repair excavation information is as follows:

Weld excavated at: D=20mm- Slag observed.

Weld excavated at: D=25mm- Slag observed.

Weld excavated at: D=32 mm- Slag observed.

Current excavation length is 8790mm~9480mm.

The excavation work ESW "M" continued until the end of the shift and is still in process. Mr. Cayabyab stated that the work is expected to continue on 10-03-13 at this location and he would be monitoring the work.

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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.

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer
