

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-030083
Date Inspected: 01-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:

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

ESW E-045, Location "F"- 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 "F" 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 -5130mm and HAZ areas located 300mm above and below the proposed repair locations.

QC/QA observed two recordable indications 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.

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

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ESW W-045, Location "H"- 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 "H" 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 -2710mm 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.

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

ESW N-043, Location "P"- 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 "P" 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 -1945mm, 3130mm and HAZ areas located 300mm above and below the prosed repair locations.

QC/QA observed four recordable indications 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 Excavation 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 @ Original Y's=-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

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preheat with a 300° F. temperature indicator. Welding was approximately 50% complete at this location on this date.

ESW Repair Excavation

RWR-201308-009

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

The QA Inspector observed ABF welder Mike Jimenez (WID-4671) performing Shield Metal Arc Welding (SMAW) on the repair excavation of Electroslag Weld Electroslag Weld (ESW) "M" Face A @ Original Y's-5670mm, 5700mm & 5720mm. Location of this repair is as follows: Excavation length (Y-5500mm~5850mm) L-350mm, W-60mm, D-46mm

Prior to welding, Mr. Jimenez 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. Welding was approximately 75% complete at this location on this date.



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