

**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-029922**Date Inspected:** 16-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:

NDT Inspection of Electroslag Welds (ESW)

RWR-201308-004

ESW S-043, Location "T"- 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 "T" 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). 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 – 2100mm, 2130mm, 3090mm, 3125mm, 3170mm and 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 seven 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. See TL-6027 for additional details on the items inspected on this date.

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## WELDING INSPECTION REPORT

( *Continued Page 2 of 4* )

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NDT Inspection of Electroslag Welds (ESW)

RWR-201307-004, 201307-008

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

The QA Inspector observed ABF QC Inspector Jesse Cayabyab perform Ultrasonic Testing (UT) on Tower Electroslag Complete Joint Penetration (CJP) weld designated as ESW "F" face A,B. The inspection was being performed on SMAW repairs. Y Locations were noted as: Y=740mm,8510mm,8790mm and additional HAZ areas located 300mm above and below the prosed repair.

No rejectable or recordable indications were observed.

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 type defects. Tandem report for work performed on this date will be completed by Mr. 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

ESW Repair excavation

RWR-201307-009

ESW E-045, Location "F"- B:

The QA Inspector was later present to observe ABF welder Kit Lai (WID-2953) performing excavation of ESW "F" Face B @ Y-6470mm to verify indications observed during Ultrasonic Testing pulse/echo & pitch/catch. Mr. Lai was performing the excavation using an air carbon arc gouging and a grinder and was instructed by ABF QC Inspector Bernie Docena notify him when indications are visible to allow QC/QA to inspect the excavation.

Location of the repair is as follows:

Weld excavated at 24mm- 8mm long planar indication (centerline crack) observed @6500.

Weld excavated at 30mm- 35mm long planar indication (centerline crack) observed @6500.

Weld excavated at 35mm- 50mm long planar indication (centerline crack) observed @6500.

Weld excavated at 40mm- 20mm long planar indication (centerline crack) observed @6500.

Weld excavated at 45mm- 6mm long planar indication (centerline crack) observed @6500.

Excavation Y=6350mm~6690mm, Current depth-45mm.

The QA Inspector and the QC Inspector performed MT testing on the excavation and observed that the planar indication remained at the above mentioned depths. Mr. Docena stated that the excavation work will continue on 8/17/13. The information regarding the centerline crack was passed along to ABF and CT METS representatives for additional review. The QA Inspector also informed Tower SMR Aaron Prchlik of the issue observed. See TL-6028 for additional details on items inspected on this date.

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )



## 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

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# WELDING INSPECTION REPORT

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your project.

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<b>Inspected By:</b>	Adame,Joe	Quality Assurance Inspector
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<b>Reviewed By:</b>	Mertz,Robert	QA Reviewer
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