

**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-029494**Date Inspected:** 25-Apr-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:** Andrew Keech, 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:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QA) Joe Adame was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**Pre-Repair Verifications of Tower Electroslag Welds (ESW)**

QA was present to observe ABF/JV QC Inspectors Andrew Keech & Bernie Docena performing Ultrasonic Testing (UT) verification of designated ESW weld repair locations prior to the start of performing air carbon arc gouging for defect removal. Locations of the rejectable indications marked for repairs were noted as:

ESW S-045 "G" Face B

Y= 5585mm (Scanned 5285~5840)

D=18mm

L=25mm

ESW E-044 "B" Face A, B

Y= 3850mm (Scanned 3700~4150)

D= 22mm

L=110mm

ESW N-041 "N" Face B

Y= 5190mm (Scanned 4890~5385)

D= 31mm

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L=60mm

ESW E-043 "Q" Face B

Y= 5695mm (Scanned 5420~5920)

D=35mm

L=25mm

ESW S-042 "V" Face B

Y= 460mm (Scanned 150~900)

D= 44mm

L=80mm

QA also performed a UT verification of proposed repair locations & HAZ areas of the repairs to be reinspected after welding. See TL-6027 for additional information on items inspected on this date.

In Process Visual Inspection

RWR 201304-017

ESW "V"-Face B

QA observed at random intervals, ABF/JV welder Chris Bruce (WID-8981) performing carbon arc air gouging of ESW welds for defect removal on ESW weld designated as "V". Location of excavation was noted as:

ESW S-042 "V" Face B

Y= (Original) 460mm.

L= 140mm

W= 40mm

D= 57mm

After excavation and grinding to bright metal ABF Quality Control (QC) Inspector Bernie Docena was observed performing MT testing of the excavation. The QC Inspector noted some planar discontinuities at 50mm deep. The welder excavated to approx. 57mm and after additional MT the indication was removed. The QA Inspector also performed MT inspection of the excavation and did not observe any weld defects. Repair area is to be inspected with UT/MT after weld repair and the required cooling time of 48 hrs as described in section 12 of AWS D1.5-02. See TL-6028 for information on items inspected on this date.

In Process Visual Inspection

RWR 201304-018

ESW B-Face B

QA observed at random intervals, ABF/JV welder Mike Jimenez (WID-4671) performing carbon arc air gouging of ESW welds for defect removal on ESW weld designated as "B". Location of excavation was noted as:

ESW E -044 "B" Face B

Y= (Original) 3850mm

L= 210mm

W= 35mm

D= 225mm

After excavation and grinding to bright metal ABF Quality Control (QC) Inspector Bernie Docena was observed performing MT testing of the excavation to ensure all discontinuities were removed prior to welding. The QA Inspector also performed MT inspection of the excavation and did not observe any weld defects. Repair area is to

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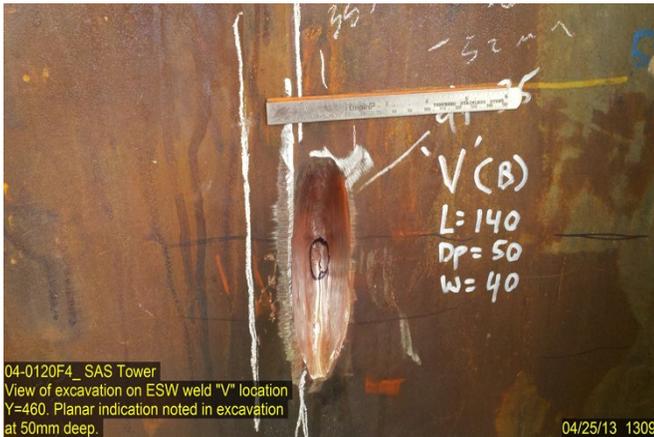
be inspected with UT/MT after weld repair and the required cooling time of 48 hrs as described in section 12 of AWS D1.5-02. See TL-6028 for information on items inspected on this date.

## Ultrasonic Testing of Tower Electroslag Welds (ESW)

RWR#'s-201208-007,201208-004,201208-008,201208-009,201208-005

ESW S-045, Location "G"- Face B:

The QC Inspector and QA commenced Ultrasonic Testing (UT) of completed repairs on Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as ESW "G" face B. Original Y locations were: 3100,3700,3720,4360,4400. Approx. 2200mm of this weld was inspected using this testing method. Due to quantity of repairs, the UT inspection was not completed on this date and will continue on 4-26-13. QC will complete final tandem report upon completion of testing of Face A.



## Summary of Conversations:

Only general conversations with ABF/JV QC NDT personnel relevant to testing and 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.

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

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