

**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  
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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-029011  
**Date Inspected:** 15-Jan-2013

**Project Name:** SAS Superstructure  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 700  
**OSM Departure Time:** 1730  
**Location:** Job Site

<b>CWI Name:</b>	As noted below.	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Tower	

**Summary of Items Observed:**

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California 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:

## Ultrasonic Testing of ESW

ESW J, Face B:

This QA performed Ultrasonic Testing (UT) on approximately 2000mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as "ESW J" face B. Location (Y=6000~8000) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5.

This QA observed one recordable longitudinal indication at the time of testing.

This QA generated a TL-6027 UT report on this date.

The following indications were observed as having a transverse orientation. Due to joint configuration and weld cap shape these indications could not be evaluated for length or "X" location.

Indication #1: Y= 6040mm

Sizing – A=77db, B= 50db, C= 6db, D= 21db

Sound Path= 102mm, Depth= 25mm

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## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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Indication #2: Y= 6140mm

Sizing – A=74db, B= 50db, C= 6db, D= 18db

Sound Path= 99mm, Depth= 26mm

Indication #3: Y= 6215mm

Sizing – A=76db, B= 50db, C= 5db, D= 21db

Sound Path= 89mm, Depth= 30mm

Indication #4: Y= 6350mm

Sizing – A=78db, B= 50db, C= 4db, D= 24db

Sound Path= 77mm, Depth= 34mm

Indication #5: Y= 6430mm

Sizing – A=66db, B= 50db, C= 3db, D= 13db

X= -5mm, L= 20mm

Sound Path= 59mm, Depth= 40mm

Indication #6: Y= 6555mm

Sizing – A=68db, B= 50db, C= 3db, D= 15db

Sound Path= 60mm, Depth= 40mm

Indication #7: Y= 6600mm

Sizing – A=76db, B= 50db, C= 4db, D= 22db

Sound Path= 70mm, Depth= 37mm

Indication #8: Y= 6620mm

Sizing – A=75db, B= 50db, C= 4db, D= 21db

Sound Path= 79mm, Depth= 33mm

Indication #9: Y= 6625mm

Sizing – A=78db, B= 50db, C= 4db, D= 24db

Sound Path= 79mm, Depth= 33mm

Indication #10: Y= 6630mm

Sizing – A=79db, B= 50db, C= 3db, D= 26db

Sound Path= 64mm, Depth= 38mm

Indication #11: Y= 6820mm

Sizing – A=78db, B= 50db, C= 4db, D= 24db

Sound Path= 78mm, Depth= 34mm

Indication #12: Y= 6870mm

Sizing – A=78db, B= 50db, C= 6db, D= 22db

Sound Path= 106mm, Depth= 24mm

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## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

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Indication #13: Y= 7040mm

Sizing – A=78db, B= 50db, C= 4db, D= 24db

Sound Path= 71mm, Depth= 36mm

Indication #14: Y= 7050mm

Sizing – A=79db, B= 50db, C= 4db, D= 25db

Sound Path= 79mm, Depth= 33mm

Indication #15: Y= 7265mm

Sizing – A=78db, B= 50db, C= 4db, D= 24db

Sound Path= 76mm, Depth= 34mm

Indication #16: Y= 7465mm

Sizing – A=79db, B= 50db, C= 5db, D= 24db

Sound Path= 84mm, Depth= 32mm

Indication #17: Y= 7480mm

Sizing – A=79db, B= 50db, C= 6db, D= 23db

Sound Path= 97mm, Depth= 27mm

Indication #18: Y= 7520mm

Sizing – A=79db, B= 50db, C= 4db, D= 25db

Sound Path= 77mm, Depth= 34mm

Indication #19: Y= 7950mm

Sizing – A=79db, B= 50db, C= 7db, D= 22db

Sound Path= 118mm, Depth= 20mm

ESW E, Face B:

This QA performed Ultrasonic Testing (UT) on approximately 1850mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as “ESW E” face B. Location (Y=9700~9850) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5.

This QA observed no recordable longitudinal indications at the time of testing.

This QA observed no transverse indications at the time of testing.

This QA generated a TL-6027 UT report on this date.

ESW T, Face A:

This QA performed Ultrasonic Testing (UT) on approximately 300mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as “ESW T” face A. Location (Y=5700~6000) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure

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## WELDING INSPECTION REPORT

( Continued Page 4 of 4 )

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SE-UT-D1.5-CT-108-ESW-R5.

This QA observed no recordable longitudinal indications at the time of testing.

This QA generated a TL-6027 UT report on this date.

The following indications were observed as having a transverse orientation. Due to joint configuration and weld cap shape these indications could not be evaluated for length or "X" location.

Indication #1: Y= 5700mm (80mm side)

Sizing – A=74db, B= 50db, C= 7db, D= 17db

Sound Path= 116mm, Depth= 39mm

Indication #2: Y= 5780mm (80mm side)

Sizing – A=79db, B= 50db, C= 9db, D= 20db

Sound Path= 138mm, Depth= 47mm

This QA performed UT of weld designated as ESW J, ESW E, and ESW T in accordance with the approved supplemental procedure. This testing was performed in tandem with QC technician Jesse Cayabyab. Tandem report for work performed on this date will be completed by QC technician and signed by both QA/QC parties. Items listed on tandem report reflect indications agreed upon by QA/QC. Due to QA/QC disagreement on indication interpretation, tandem report may not reflect all indications discovered by QA at time of testing. Please see TL-6027 for complete listing of QA recorded indications.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### **Summary of Conversations:**

Conversation was relevant to 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.

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<b>Inspected By:</b>	Clifford,William	Quality Assurance Inspector
<b>Reviewed By:</b>	Reyes,Danny	QA Reviewer

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