DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028684
Date Inspected: 01-Nov-2012

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

CWI Name:	As noted below.		**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: 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 V, Face A:

This QA performed Ultrasonic Testing (UT) of Tower Electroslag Complete Joint Penetration (CJP) shear plate welds designated as “ESW V” on face A.

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

Testing was performed to verify previous findings of transverse indications. This QA verified location, depth, and indication ratings for assigned indications at each joint.

The following indications were observed. Due to joint configuration and weld cap shape, indications observed as having a transverse orientation could not be evaluated for length or “X” location.
Y locations are recorded as:

Indication #1: Y= 9320mm
Sizing – A=76db, B= 51db, C= 7db, D= 13db
Sound Path= 110.0mm, Depth= 38.36mm

Indication #2: Y= 9490mm
Sizing – A=80db, B= 51db, C= 9db, D= 19db
Sound Path= 140.2mm, Depth= 48.90mm

Indication #3: Y= 9600mm
Sizing – A=67db, B= 51db, C= 7db, D= 9db
X= 5mm, L= 35mm
Sound Path= 113.6mm, Depth= 39.62mm

ESW Q, Face A:

This QA performed Ultrasonic Testing (UT) of Tower Electroslag Complete Joint Penetration (CJP) shear plate welds designated as “ESW Q” on face A.

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

Testing was performed to verify previous findings of transverse indications. This QA verified location, depth, and indication ratings for assigned indications at each joint.

The following indications were observed. Due to joint configuration and weld cap shape, indications observed as having a transverse orientation could not be evaluated for length or “X” location.
Y locations are recorded as:

Indication #1: Y= 6610mm
Sizing – A=70db, B= 54db, C= 5db, D= 11db
X= -12mm, L= 25mm
Sound Path= 81.86mm, Depth= 28.53mm

Indication #2: Y= 6585mm
Sizing – A=71db, B= 54db, C= 5db, D= 12db
X= -12mm, L= 25mm
Sound Path= 85.57mm, Depth= 29.82mm

Indication #3: Y= 6620mm
Sizing – A=81db, B= 54db, C= 6db, D= 22db
Sound Path= 96.19mm, Depth= 33.53mm

Indication #4: Y= 6585mm
Sizing – A=83db, B= 54db, C= 6db, D= 23db
Sound Path= 101.1mm, Depth= 35.27mm

Indication #5: Y= 6010mm
Sizing – A=83db, B= 54db, C= 6db, D= 22db
Sound Path= 102.7mm, Depth= 35.81mm

ESW P, Face A:

This QA performed Ultrasonic Testing (UT) of Tower Electroslag Complete Joint Penetration (CJP) shear plate welds designated as “ESW P” on face A.

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

Testing was performed to verify previous findings of transverse indications. This QA verified location, depth, and indication ratings for assigned indications at each joint.

The following indications were observed. Due to joint configuration and weld cap shape, indications observed as having a transverse orientation could not be evaluated for length or “X” location.
Y locations are recorded as:

Indication #1: Y= 5795mm
Sizing – A=80db, B= 51db, C= 8db, D= 21db
Sound Path= 123mm, Depth= 44mm

Indication #2: Y= 5705mm
Sizing – A=61db, B= 51db, C= 6db, D= 4db
X= 18mm, L= 45mm
Sound Path= 103.4mm, Depth= 36.06mm

Indication #3: Y= 5695mm
Sizing – A= 77db, B= 51db, C= 8db, D= 18db
Sound Path= 122mm, Depth= 44mm

Indication #4: Y= 5690mm
Sizing – A=72db, B= 51db, C= 6db, D= 5db
X= -8mm, L= 175mm
Sound Path= 106.3mm, Depth= 37.04mm

Indication #5: Y= 5370mm
Sizing – A=69db, B= 51db, C= 13db, D= 5db
X= -20mm, L= 35mm
Sound Path= 195.8mm, Depth= 68.27mm

Indication #6: Y= 5350mm
Sizing – A=76db, B= 51db, C= 15db, D= 10db
Sound Path= 212mm, Depth= 76mm

Indication #7: Y= 5315mm
Sizing – A=79db, B= 51db, C= 15db, D= 13b
Sound Path= 216mm, Depth= 77mm

This QA performed UT of welds designated as ESW V, ESW P and ESW Q in accordance with the approved supplemental procedure. This testing was performed in tandem with QC technician Andrew Keech. 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.

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.

Inspected By:	Clifford,William	Quality Assurance Inspector
Reviewed By:	Reyes,Danny	QA Reviewer