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-027019
Date Inspected: 12-Jan-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: Jobsite

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: SAS OBG

Summary of Items Observed:

Quality Assurance Inspector (QA) Douglas Frey 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:

12E/PP114/E4 Lifting Lug Hole W1 (Exterior)

This QA Inspector randomly observed ABF welder Jorge Lopez (Welder ID 6149) performing the repair welding operation of a rejectable ultrasonic indication as per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on “A” deck lifting lug hole W1 at 12E/PP114/E4 on the exterior of the OBG. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 10 degrees C and the welding parameters (Amps=135) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications. This QA Inspector noted that the work was completed on this date and appeared to be in general conformance with the contract documents.

12E/13E/E2 Repair (Exterior)

This QA Inspector observed ABF welder Xiao Jian Wan (ID 9677) pre-heat the joint to 10°C prior to performing Shielded metal Arc Welding (SMAW) in the 4G overhead position on an ultrasonic rejectable indication located at y + 1600 with 260mm’s in length, 25mm’s in width and 11mm’s in depth, on “E2” at 12E/13E on the exterior of the OBG. This QA Inspector observed the QC Inspector monitor the inter-pass

temperatures and the welding to ensure the parameters were in compliance pertaining to ABF-WPS-D15-1001-Repair. The parameters were recorded as (Amperes=127) utilizing a 3.2 mm E7018-H4R electrode. This QA Inspector randomly observed the ABF welder grind and blend the start and stop areas of the weld throughout the joints depth. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general conformance with the contract specifications.

12E/13E/D1 Repair (Exterior)

This QA Inspector randomly observed ABF welder Wai Kit Lai (Welder ID 2953) performing the repair welding operation of rejectable ultrasonic indications as per the SMAW process in the (4G) overhead position on “D1” at 12E/13E on the exterior of the OBG. The dimensions of the excavations were recorded as; (Length/130mm/Width/25mm/Depth/21mm), (Length/210mm/Width/25mm/Depth20mm), (Length/150mm/Width/25mm/Depth/24mm), (Length/130mm/Width/25mm/Depth/17mm). This QA Inspector observed QC Inspector Fred Von Hoff perform a Magnetic Particle Inspection (MT) of the excavations to determine the soundness of the metal. This QA Inspector noted that Mr. Von Hoff found no rejectable indications. This QA Inspector observed the QC Inspector monitor the welding and the parameters to ensure compliance with the approved welding procedure and the contract specifications. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications and this QA Inspector noted that the work is in process.

13E/PP118.5/E3 Lifting Lug Hole W2 (Exterior)

This QA Inspector observed QC Inspector Sal Merino utilize a Bridge Cam Gage to measure the fit-up of the 20 mm plate in the B-U-4a joint on lifting lug hole 13E/PP118.5/E3. This QA Inspector verified the fit-up as acceptable and employed a 65°C Tempilstik to ensure the minimum pre-heat temperature had been achieved. This QA Inspector randomly observed ABF welder Salvador Sandoval (ID 6149) performing the SMAW process in the (1G) flat position and observed the QC Inspector verify the welding parameters were in accordance with ABF-WPS-D1.5-1050A-CU. (The Amperage was recorded as 253). This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general compliance with the approved WPS and the contract specifications.

12E/PP114/E4 Lifting Lug Hole W2 Repair (Exterior)

This QA Inspector randomly observed ABF welder Jorge Lopez performing the back-gouge operation of ultrasonic rejectable indications on “A” deck Lifting Lug Hole W2 at 12E/PP114/E4. The excavations were recorded as: "Y" 610 mm: (20 mm wide; 60 mm length; and 7 mm in depth) “Y” 68 mm: (20 mm wide; 35 mm length; and 12 mm in depth) “Y” 314 mm: (20 mm wide; 20 mm length; and 12 mm in depth). This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Jorge Lopez (Welder ID 6149) performing the repair welding operation of three (3) ultrasonic indications as per the SMAW process in the (1G) flat position on “A”

deck Lifting Lug Hole W2 at 12E/PP114/E4. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

QA Ultrasonic Inspection (Exterior)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 100% of the welds listed below. These welds were performed by a non-qualified welder and are referenced in incident report CT-103. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

14E/PP125.2/E4.2
14E/PP126.7/E4.2
14E/PP126.7/E5
14E/PP125.2/E5

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

The were no pertinent conversations to report.

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 Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer