

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-027014**Date Inspected:** 10-Jan-2012**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:** Jobsite

CWI Name:	As noted below		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	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/PP115/E3 Lifting Lug Hole W1 (Interior)

This QA Inspector observed ABF welder Salvador Sandoval (ID 2202) pre-heat the joint to 10°C prior to performing Shielded metal Arc Welding (SMAW) in the 4G overhead position on lifting lug hole W2 at 12E/PP115/E3. 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-D15-1110A-Revision 1. The parameters were recorded as (Amperes=128) 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/PP115/E4 Lifting Lug Hole W2/W3 (Interior)

This QA Inspector randomly observed ABF welder Jorge Lopez performing the back-gouge operations on the interior of "A" deck Lifting Lug Holes 12E/PP115/E4/W2 and W3. This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the back gouges to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present. This QA

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Inspector made random observations of ABF welder Jorge Lopez (ID 6149) performing the SMAW process in the (4G) overhead position. This QA Inspector observed the QC Inspector measure the pre-heat temperature to verify a minimum of 150°F was achieved. This QA Inspector also observed the QC Inspector monitoring the welding and verifying that the parameters were in compliance pertaining to ABF-WPS-D15-1110A-Revision 1. The parameters were recorded as (Amperes=135) utilizing a 3.2 mm E7018-H4R electrode. During in process welding, this QA Inspector noted that the QC Inspector measured the inter-pass temperatures to maintain a heat range below 230°C. This QA Inspector made subsequent observations during the shift and noted that the work was in process and appeared to be in general conformance to the contract specifications.

Ultrasonic Inspection (Exterior)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 25% of the welds listed below. 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.

9W/PP80/W4 Lifting Lug hole W4

11W/PP104/W4 Lifting Lug Holes W1-W4

Magnetic Particle Inspection (Exterior)

This QA Inspector performed a Magnetic Particle (MT) Inspection of the locations listed below. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

9W/PP79/W4 Lifting Lug holes W1, W3 and W4

9W/PP80/W4 Lifting Lug Hole W4

11W/PP104/W4 Lifting Lug Holes W1-W4

12E/13E/E2 Repair (Exterior)

This QA Inspector randomly observed the in process repair welding of an ultrasonic rejectable indication. ABF welder Wai Kit Lai was observed performing the SMAW process in the 4G overhead position on "E2" at 12E/13E located at "Y" 1340 mm. This QA Inspector observed QC Inspector Fred Von Hoff monitor the welding to ensure the parameters conform with ABF-WPS-D1.5 1001-Repair. This QA Inspector made subsequent observations to monitor quality and noted that the work was in progress and appeared to be in general conformance with the contract specifications.

This QA Inspector randomly observed ABF welder Xiao Jian Wan (Welder ID 9677) performing the repair welding operation of an ultrasonic indication as per the SMAW process in the (4G) overhead position on "E2" of 12E/13E on the exterior of the OBG. This QA Inspector observed the use of E7018-H4R electrodes and QC

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Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=136) 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.

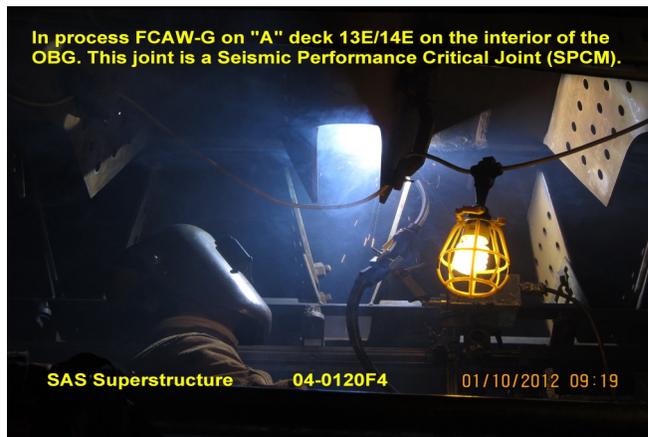
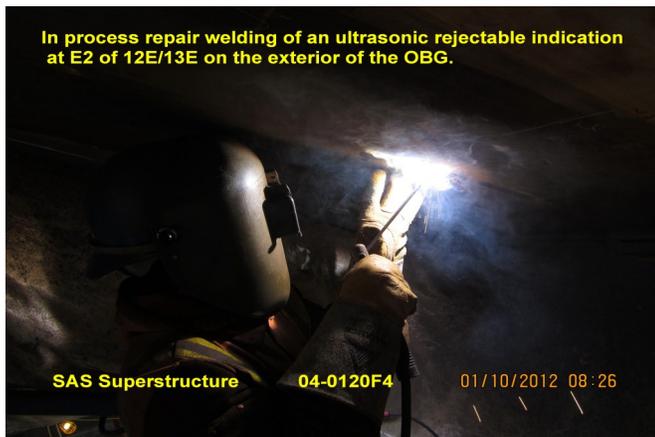
12E/13E/A3 FCAW (Interior)

This QA Inspector randomly observed ABF welding operator James Zhen (ID 6001) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position on face “B” of deck plate “A3”, at 12E/13E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=265/V=23.7/TS=180/HI=2.09). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appears to be in general conformance to the contract requirements.

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.

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