

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-027015**Date Inspected:** 11-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**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/PP115/E3 Lifting Lug Hole W4 (Interior)

This QA Inspector randomly observed QC Inspector Sal Merino performing MT inspection on the back gouge of face "B" of lifting lug hole W4 at 12E/PP115/E3 located on the interior of the OBG. This QA Inspector verified that the welds were free of indications and found to be satisfactory. This QA Inspector observed the QC Inspector measure the pre-heat of the joint to verify a minimum of 10 degrees C had been achieved and this QA Inspector noted the utilization of E9018-H4R electrodes with Amperage of 135. This QA Inspector randomly observed ABF welder Salvador Sandoval (ID 2202) perform the Shielded Metal Arc Welding (SMAW) process in the (4G) overhead position. This QA Inspector observed the QC Inspector monitoring the inter-pass temperatures and the welding to ensure the parameters were in compliance pertaining to ABF-WPS-D15-1110A-Revision 1. This QA Inspector 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/PP115/E4 Lifting Lug Hole W2 (Interior)

This QA Inspector observed ABF welder Jorge Lopez (ID 6149) 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

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12E/PP115/E4. 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=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.

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.

12E/13E/A5 - This joint is a seismic Performance Critical member.

Magnetic Particle Inspection (Exterior)

This QA Inspector performed a Magnetic Particle (MT) Inspection of the location listed above. 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.

12E/13E/E2 Repair (Exterior)

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

12E/PP115/E3 Lifting Lug Hole W3 (Interior)

This QA Inspector randomly observed QC Inspector John Pagliero perform a Magnetic Particle (MT) inspection of the back gouged weld area on face "B" of "A" deck lifting lug hole W3 located at 12E/PP115/E3. This QA Inspector observed that Mr. Pagliero found no rejectable indications and the work appeared to be in general conformance with the contract specifications.

This QA Inspector randomly observed ABF welder Salvador Sandoval (Welder ID 2202) performing welding operations as per the SMAW process in the (4G) overhead position on "A" deck Lifting Lug Hole W3 at 12E/PP115/E3. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector John Pagliero

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verify that the preheat temperature and that the welding parameters (Amps=135) were in accordance with ABF-WPS-D15-1110A-Revision 1. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

12E/PP114/E4 Lifting Lug Hole W1 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 W1 at 12E/PP114/E4. The Excavations were recorded as: "Y" 147 mm: (20 mm wide; 90 mm length; and 19 mm in depth) "Y" 294 mm: (20 mm wide; 100 mm length; and 10 mm in depth) "Y" 480 mm: (30 mm wide; 150 mm length; and 8 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 W1 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.

12E/13E/D1 Repair (Exterior)

This QA Inspector at random intervals, observed ABF qualified welder Wai Kit Lai ID 2953 perform repair welding as pertaining to the SMAW process in the 4G overhead position on bottom plate "D" weld section 1 at 12E/13E on the exterior of the OBG. This QA Inspector observed QC Inspector John Pagliero monitor the welding and the parameters to ensure compliance with the approved welding procedure. This QA Inspector made subsequent observations throughout the shift and noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

Fillet welding 139M Elevation Tower (Exterior)

This QA Inspector randomly observed ABF welder Rick Clayborn (ID2773) weld four (4) attachment plates on an access ladder to the north face of the shear link between the south shaft and the east shaft of the tower at elevation 139. The welder performed the Flux Core Arc Welding with Gas (FCAW-G) process to deposit 3.8mm fillet welds on each side of the plates. Upon completion of the welding, this QA Inspector visually inspected the work and found it to be free of indications. During the in process welding, this QA Inspector noted that the welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

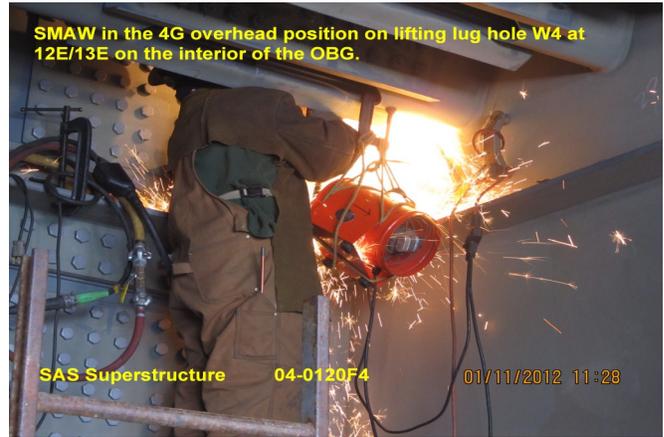
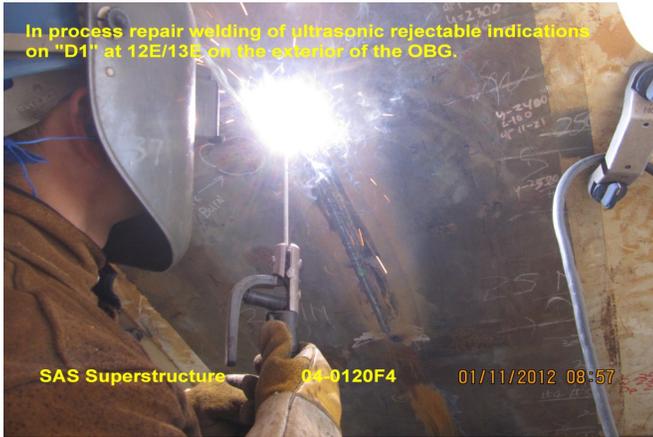
Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

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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
Reviewed By:	Levell,Bill	QA Reviewer
