

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-026947**Date Inspected:** 22-Dec-2011**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:

1. 11E/PP103/E3 Lifting Lug Holes E2 and E4 (Interior)
2. 12E/PP111/E4 Lifting Lug Holes E1 and E3 (Interior)
3. 11W/PP100/W3 Lifting Lug Holes W1 and W3 (Interior)
4. FW Spencer Pipe Welding (Exterior)

1. 11E/PP103/E3 Lifting Lug Holes E2 and E4 (Interior)

This QA Inspector randomly observed QC Inspector Sal Merino performing MT inspection on the back gouge of face "B" of Lifting Lug holes 11E/PP103/E3 E2 and E4 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.

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2. 12E/PP111/E4 Lifting Lug Holes E1 and E3 (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/PP111/E4/E1 and E3. 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 Inspector made random observations of ABF welder Jorge Lopez (ID 6149) perform the Shielded Metal Arc Welding process (SMAW) in the (4G) overhead position. This QA Inspector observed QC Inspector Sal Merino 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 completed on this date and appeared to be in general conformance to the contract specifications.

3. 11W/PP100/W3 Lifting Lug Holes W1 and W3 (Interior)

This QA Inspector randomly observed the in process welding of lifting lug holes W1 and W3 at 11W/PP100/W3. The SMAW process was performed by ABF welder Mike Jimenez (ID 4671) in the (4G) overhead position utilizing E7018-H4R electrodes with amperage of 135. This QA Inspector observed the QC Inspector measure inter-pass temperatures and monitor the welding to insure the parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This QA Inspector made periodic observations to monitor quality and noted that the work was completed on this date and appeared to be in general conformance with the contract specifications.

QA Ultrasonic Inspection

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

13E/14E/H (SPCM)

13E/14E/I (SPCM)

12W/13W/E1/E2

11E/PP100/E4/E1

11E/PP101/E4/E1-E4

4. FW Spencer Pipe Welding (Exterior)

This QA Inspector observed F.W. Spencer welder Damian Llanos ID# 6645 performing Shielded Metal Arc Welding (SMAW) in the 2G horizontal position on 3 inch schedule 80 pipe located at the 90 m level of the Tower.

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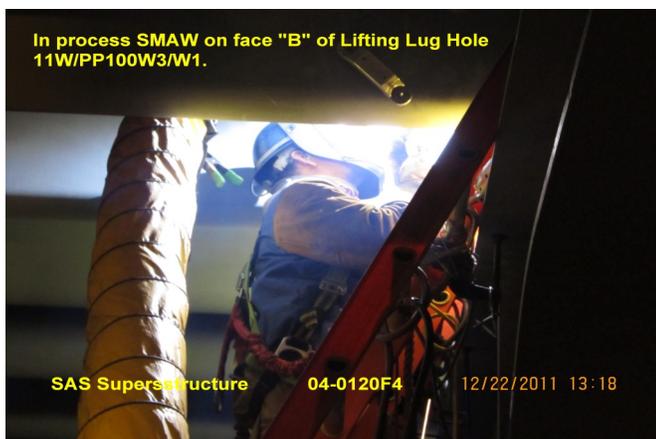
Upon completion of the welding, the pipe is placed at the elevation indicated in the corresponding weld number. This QA Inspector verified the fit up of the joints and found it to be satisfactory. This QA Inspector observed QC Inspector Steve Jensen monitoring the welding to ensure the welding parameters were in compliance pertaining to WPS-1-12-1 Revision 2 (1.12). The welder was observed implementing 6010 electrodes in the root pass with the balance using 7018 electrodes. The QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work listed below was completed on this date and appeared to be in general conformance with the contract documents.

35/3/T/55 36/3/T/54 51/2/T/53
53/2/T/48 55/2/T/34 52/2/T/53
54/2/T/41

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
Reviewed By:	Levell,Bill	QA Reviewer
