

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-026793**Date Inspected:** 01-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
Component:	SAS OBG		

Bridge No: 34-0006**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:

- 14W/PP125.2/W4.2 Vent Hole (Exterior)
- 14W/PP126.2/W2.4 Vent Hole (Exterior)
- 14W/PP125/W4 Lifting Lug Hole W3 (Exterior)
- 14W/126.2/W2.6 Vent Hole (Interior)
- 14W/PP125.2/W5 Vent Hole (Exterior)

Orthotropic Box Girder (OBG) section: The QC Documents observed being used by this QA Inspector for the following weld joints appeared to be designated as Seismic Performance Critical Members (SPCM).

- 14W/PP125.2/W4.2 Vent Hole (Exterior)

This QA Inspector made random observations of ABF welder Jorge Lopez (ID 6149) perform the Shielded Metal Arc Welding process (SMAW) in the 1G flat position on Vent Hole (VH) 14W/PP125.2/W4.2. This QA Inspector observed QC Inspector Sal Merino measure the pre-heat temperature to verify a minimum of 10°C 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-D15-1050A-CU. The parameters were recorded as (Amperes=228) utilizing a 4.0 mm E7018-H4R electrode. During in process welding, this QA Inspector noted that

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

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.

2. 14W/PP126.2/W2.4 Vent Hole (Exterior)

This QA Inspector randomly observed the in process welding of an “A” deck vent hole at 14W/PP126.2/W2.4. ABF welder Mike Jimenez (ID 4671) was observed performing the SMAW process in the (1G) flat position utilizing a 3.8 mm E7018-H4R electrode with amperage of 190. This QA Inspector observed QC Inspector Sal Merino monitor the welding to ensure that the parameters were in accordance with ABF- WPS-D15-1050A-CU and verify the inter-pass temperatures to maintain a heat range below 230°C. 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.

3. 14W/PP125/W4 Lifting Lug Hole W3 (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 BU-4a joint on lifting lug hole 14W/PP125/W4/W3. 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 2202) performing the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position and observed the QC Inspector verify the welding parameters were in accordance with the above mentioned WPS. 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.

This QA Inspector performed a progress survey of the exterior and interior OBG deck, side, bottom and edge plate splices at 12W/13W as directed by QA Lead Inspector, Daniel Reyes.

4. 14W/PP126.2/W2.6 Vent Hole (Interior)

This QA Inspector randomly observed QC Inspector Sal Merino perform a Magnetic Particle (MT) inspection of the back gouged weld area on OBG “A” deck vent hole 14W/PP126.2/W2.6. This QA Inspector observed that Mr. Merino found no rejectable indications and the work appeared to be in general conformance with the contract specifications. This QA Inspector made random observations of ABF welder Mike Jimenez (ID 4671) perform the Shielded Metal Arc Welding process (SMAW) in the (4G) overhead position on Vent Hole (VH) 14W/PP126.2/W2.6. This QA Inspector observed QC Inspector Sal Merino measure the pre-heat temperature to verify a minimum of 10°C 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=230) utilizing a 4.0 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.

5. 14W/PP125.2/W5 Vent Hole (Exterior)

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

This QA Inspector randomly observed QC Inspector Sal Merino measure the pre-heat temperature of the B-U-4a Complete Joint Penetration (CJP) weld on vent hole 14W/PP125.2/W5. This QA Inspector observed ABF welder Jorge Lopez perform the SMAW process utilizing E7018-H4R electrodes in the (1G) flat position and also observed the QC Inspector monitor the welding and the parameters to ensure conformance with ABF-WPS-D15-1050A-CU. This QA Inspector made periodic observations to monitor quality and noted that the work was in process and appeared to be in general conformance with the contract specifications.

14W/PP126.7/W3.7 Vent Hole R1 (Exterior)

This QA Inspector randomly observed QC Inspector Patrick Swain perform Ultrasonic Testing (UT) Inspection on an "A" deck vent hole located at 14W/PP126.7/W3.7. This QA Inspector verified the instrument through calibration and utilization. This QA Inspector observed the QC Inspector utilize a 70° wedge/transducer and noted scanning from both sides of the weld. The techniques utilized for scanning to determine a defect and sizing (length) were performed to comply with the contract documents. No rejectable indications were noted.

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. No 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