

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-026787**Date Inspected:** 30-Nov-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**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:

1. 14W/PP125/W3 Lifting Lug Hole W1 (Exterior)
2. 14W/PP126.2/W2.6 Vent Hole (Exterior)
3. 14W/PP127.2/W5 Vent Hole (Exterior)
4. 14W/PP125.2/W4.2 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).

1. 14W/PP125/W3 Lifting Lug Hole W1 (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-U4a joint on lifting lug hole 14W/PP125/W3/W1. 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 (welder 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 ABF-WPS-D15-1050A-CU. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

appeared to be in general compliance with the approved WPS and the contract specifications.

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

This QA Inspector Observed QC Inspector Sal Merino perform joint fit-up operations on “A” deck vent hole 14W/PP126.2/W2.6 on the exterior of the OBG. This QA Inspector verified the B-U4a complete Joint penetration (CJP) fit-up and found it to be satisfactory and in conformance with the welding procedure as mentioned above. This QA Inspector randomly observed ABF welder Salvador Sandoval (welder ID 2202) perform the SMAW process in the 1G flat position with QC Inspector Sal Merino monitoring inter-pass temperatures and welding parameters to ensure compliance with the approved WPS and the contract specifications. At the end of this QA Inspector’s shift, the work was in progress and appeared to be in general conformance with the contract specifications.

3. 14W/PP127.2/W5 Vent Hole (Exterior)

This QA Inspector randomly observed QC Inspector Sal Merino measure the pre-heat temperature of the B-U4a Complete Joint Penetration (CJP) weld on vent hole 14W/PP127.2/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 completed on this date and appeared to be in general conformance with the contract specifications.

4. 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=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 in progress and appeared to be in general conformance to the contract specifications.

This QA Inspector randomly observed QC Inspector Patrick Swain perform Ultrasonic Testing (UT) on two (2) “A” deck vent holes and one (1) “A” deck lifting lug hole. 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 following locations were inspected:

14E/PP125.2/E5 - no rejectable indications noted.

14E/PP126.7/E5 - no rejectable indications noted.

14W/PP128/W3/W2 – recordable indications at y+105 x-2, length 5mm, 19.2mm in depth and +18db.

y+ 500 x+7, length 5mm, 19.4mm in depth and +15 db. – No rejectable indications noted.

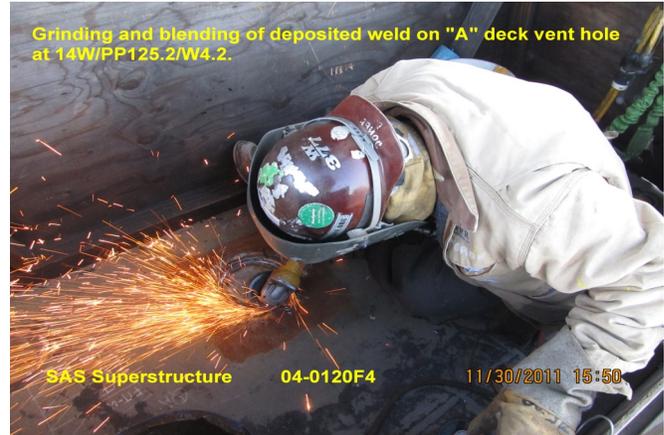
WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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