

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-026721**Date Inspected:** 16-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:** Job Site**CWI Name:** Bernie Docena**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:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of side plate C1.2/C2 splice butt joint and five (5) vent hole infill plate to top deck plate butt joints. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. OBG 12W/13W side plate C1.2/C2 inside - QA VT/MT verified
2. OBG 14E-PP125.7-E3.7 vent holes infill plate to deck plate outside - QA VT/MT verified
3. OBG 14E-PP126.2-E2.8 vent holes infill plate to deck plate outside - QA VT/MT verified
4. OBG 14E-PP126.7-E3.2 vent holes infill plate to deck plate outside - QA VT/MT verified
5. OBG 14E-PP126.7-E2.7 vent holes infill plate to deck plate outside - QA VT/MT verified
6. OBG 14E-PP126.7-E2.9 vent holes infill plate to deck plate outside - QA VT/MT verified

At OBG 13E/14E bottom plate 'D1' outside, QA randomly observed ABF personnel James Zhen and Wai Kitlai continuing to perform plasma arc gouging on the backing bar removal of the splice butt joint. The personnel were using an Esab plasma arc gouging machine that has the nozzle holder attached to a Bug-o track. Gouging of the

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

backing bar was not completed today and should continue tomorrow.

At OBG 14E-PP126.2-E2.4 vent hole infill plate to top deck plate outside, ABF welder Salvador Sandoval was observed continuing to perform 1G SMAW welding root pass to fill pass on the infill plate to top deck plate butt joint. The welder was noted using 1/8" diameter E7018H4R for root pass then switched to 5/32" diameter E7018H4R electrode for the fill pass. The welder was noted implementing Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the Seismic Performance Critical Member (SPCM) butt joint. Prior welding, ABF QC Bernie Docena was observed inspecting the fit up of the butt joints. QA verified the fit up alignment of the lifting lug hole which deemed acceptable to the contract requirements. During welding, ABF QC Bernie Docena was noted monitoring the welder's welding parameters with measured working current of 123 amperes on the 1/8" electrode while 180 amperes on the 5/32" electrode. The welder was noted preheating the plates to more than 150°F using propylene gas torch prior welding. At the end of the shift, fill pass welding on the top side location of the butt joint was still continuing and should remain tomorrow.

At OBG 14E-PP126.7-E2.5 vent hole infill plate to top deck plate outside, ABF welder Erick Sparks was observed continuing to perform 1G SMAW welding fill pass on the infill plate to top deck plate butt joint. The welder was noted using 1/8" diameter E7018H4R for root pass and fill pass. The welder was noted implementing Welding Procedure Specification (WPS) ABF-WPS-D15-1050A-CU for the SPCM butt joint. Prior welding, ABF QC Bernie Docena was observed inspecting the fit up of the butt joints. During welding, ABF QC Bernie Docena was noted monitoring the welder's welding parameters with measured working current of 130 amperes on the 1/8" E7018H4R electrode. During the shift, fill pass welding on the top side location of the butt joint was still continuing when the welder was pulled out and went to another job assignment.

At Tower elevation 53 meters, this QA randomly observed FW Spencer qualified welder Curtis Jump continuing to perform Complete Joint Penetration (CJP) 2G (horizontal position) Shielded Metal Arc Welding (SMAW) welding fill pass to cover pass on the 3" diameter compressed air line. The welder was noted welding the root pass using 3/32" diameter E6010 electrode and followed by fill pass to cover pass using 3/32" diameter E7018H4R implementing Caltrans approved procedure FW Spencer WPS 1-12-1Rev 2. The welder was noted preheating and removing the moisture of the joint using a portable propane gas torch prior welding. During welding, ABF QC Steve Jensen was noted monitoring the parameters of the welder with 85 Amps measured current during welding. During the shift, this job was turned over to fellow QA Craig Hager due to other job assignment given to this QA.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

No significant conversation occurred today.

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 SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer