

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-027569**Date Inspected:** 09-May-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:** Job Site

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:

13E PP121.2 @ 1900mm (Exterior)

This QA Inspector randomly observed QC Inspector William Sherwood verify the pre-heat temperature of the Complete Joint Penetration (CJP) joint at y+1900mm of 13E PP121.2 prior to the Submerged Arc welding (SAW) process performed by ABF welder Kenneth Chappell (ID 3833) utilizing a Lincoln track mounted wire feeder. This QA Inspector verified that the remote oven for the ESAB EN 760 Flux was in the on position with the dial set at 250° F. ABF welding Superintendent Dan Ieraci provided a remote temperature gauge to verify the flux temperature inside of the oven. This QA Inspector verified that the F7A2-EM12KH8 electrode spool was compliant with ABF-WPS-D1.5-4042B-Revision 1. QC Inspector William Sherwood measured the parameters for amperage, volts, travel speed and the heat input as the welder adjusted the controls on the Lincoln track mounted wire feeder. On a subsequent observation this QA Inspector noted that the line along PP121.2 had been completed and observed the welder and ABF welding personnel relocating and setting up the equipment at 13E/14E-A2.1. On a subsequent observation, the welder was observed continuing the production welding utilizing the SAW process on the A2.1 line of 13E/14E on the exterior of the OBG. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location was in progress and appeared to be in general conformance with the contract specifications.

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

13E PP121.6 @ 2175mm (Exterior)

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) pre-heat the CJP joint along 13E PP121.6 @ y+2175mm. QC Inspector William Sherwood verified the correct temperature as per the approved WPS and afterward's verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-1040C-CU using E7018 4.0mm diameter electrodes drawing amperage of 135. This QA Inspector observed the welder performing the Shielded Metal Arc Welding (SMAW) process in the 1G flat position conducting root and fill welding. The welder was observed cleaning the start/stop edges of the work utilizing a small disc grinder to smooth and blend the transitions and compressed air to clear the debris. On a subsequent observation, the welder was noted as continuing the production welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. This QA Inspector noted that the work by Mr. Jimenez was in progress and appeared to be in general conformance with the contract documents.

13W PP121.6 @ 100mm – 6000mm (Exterior)

This QA Inspector randomly observed ABF welder Steve Davis (ID 7889) pre-heat the joint along 13W PP121.6 and ABF welder Khit Lounechaney (ID 4985) pre-heat the joint along 13W-W2.8 @ y+100mm to y+6000mm. QC Inspector Sal Merino verified the correct temperature as per the approved WPS and afterward's verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1.5-1040C-CU using E7018 4.0mm diameter electrodes drawing amperage of 178 for Mr. Davis and 225 amperes with 4.8mm electrodes for Mr. Lounechaney. This QA Inspector observed the welders performing the SMAW process in the 1G flat positions continuing root and fill welding. The welders were observed cleaning the start/stop edges of the work utilizing small disc grinders to smooth and blend the transitions and compressed air to clear the debris. On a subsequent observation, the welders were noted as continuing the production welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. On a subsequent observation, the welders were observed continuing the production root and fill welding and this QA Inspector noted that no issues had arisen. This QA Inspector made subsequent observations to monitor quality and noted that the work at 13W-W2.8 and 13W PP121.6 was in progress and appeared to be in general conformance with the contract documents.

13W PP121.2/122.2 (Exterior)

This QA Inspector randomly observed ABF welder Jacob Stafford (ID 8020) pre-heat the joint along 13W PP121.2 @ y+1900mm and ABF welder Edward Brown (ID 9331) pre-heat the joint along 13W PP122.2 @ y+8650mm. QC Inspector Sal Merino verified the correct temperature as per the approved WPS and afterward's

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1. 5-1040C-CU using E7018 4.0mm diameter electrodes. This QA Inspector observed the welders performing the SMAW process in the 1G flat positions continuing root and fill welding. The welders were observed cleaning the start/stop edges of the work utilizing small disc grinders to smooth and blend the transitions and compressed air to clear the debris. On a subsequent observation, the welders were noted as continuing the production welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. On a subsequent observation, the welders were observed continuing the production root and fill welding and this QA Inspector noted that no issues had arisen. This QA Inspector made subsequent observations to monitor quality and noted that the work at these locations was in progress and appeared to be in general conformance with the contract documents.

13W/14W-A2.1-A1 (Exterior)

This QA Inspector randomly observed ABF welder Salvador Sandoval (ID 2202) pre-heat the CJP joint along 13W/14W-A2.1-A1. QC Inspector Sal Merino verified the correct temperature as per the approved WPS and afterward's verified that the welding parameters (Amps and Travel Speed) were in accordance with ABF-WPS-D1. 5-1040C-CU using E7018 4.0mm diameter electrodes. This QA Inspector observed the welder performing the SMAW process in the 1G flat position conducting root and fill welding. The welder was observed cleaning the start/stop edges of the work utilizing a small disc grinder to smooth and blend the transitions and compressed air to clear the debris. On a subsequent observation, the welder was noted as continuing the production welding and between passes the QC Inspector verified the welding parameters and surface temperatures utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. This QA Inspector noted that the electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. This QA Inspector noted that the work by Mr. Sandoval was in progress and appeared to be in general conformance with the contract documents.

13E PP117.7 E5-PS-5 (Exterior)

This QA Inspector performed Magnetic Particle (MT) testing on PS-5 Pipe Support brackets located at 13E PP117.7 E5, PP118.7, PP119.7, PP121, PP122.2 and 13E PP123 E5 on the exterior of the OBG. This QA Inspector performed MT testing utilizing 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.

11E PP104-Suspender Bracket Modification (Exterior)

This QA Inspector made random observations of ABF welder Eric Sparks (ID 3040) performing SMAW

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

utilizing E7018-H4R electrodes on the modification plates for the suspender brackets at 11E PP104. The work required a 12mm fillet in the 4F and 2F with a 22mm fillet in the 3F vertical positions. QC Inspector William Sherwood was present to monitor the welding and the parameters as they pertained to ABF-WPS-D1.5-F1200A. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location had been completed on this date and appeared to be in general conformance with the contract documents.

Summary of Conversations:

This QA Inspector had conversation with QA Lead Inspector Daniel Reyes concerning the status of the Drop-In Panels at 13W.



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
