DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-028322
Date Inspected: 05-Sep-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1700
Location: Job Site

CWI Name: As noted below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ 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:

12E PP112.5-BW2 (Interior)

This QA Inspector made random observations of ABF/JV qualified welder Jose Torres #6235 performing the Shielded Metal Arc Welding (SMAW) process in the 3G vertical position utilizing E7018-H4R electrodes on the beam web located at 12E PP112.5-BW2 on the interior of the OBG. QC Inspector Salvador Merino verified the temperature and recorded the parameters as acceptable and within the requirements of ABF-WPS-D1. 5-1040A-Revision 1. The welder was observed welding the height of the joint followed by grinding and blending of the work utilizing a small disc grinder. On a subsequent observation, this QA Inspector noted that the welding was performed in the vertical position utilizing the E7018-H4R low hydrogen electrodes. The 3.2mm 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. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. At the time of the observation no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was in progress and appeared to be in general conformance with the contract documents.

12E/13E-LS2 (Exterior)

This QA Inspector made random observations of the first time repair of the longitudinal stiffener located at 12E/13E-LS2 on the interior of the OBG. QC Inspector Salvador Merino performed a Magnetic Particle (MT) test and inspection of the excavation to verify the soundness of the metal and noted no indications. This QA Inspector observed QC verify the welder pre-heat the 30mm joint to +200°F. This QA Inspector made random observations of ABF/JV qualified welder Jin Quan Huang #1088 performing the SMAW Process in the 3G vertical position utilizing E9018-H4R electrodes. QC Inspector Salvador Merino verified the temperature and recorded the parameters as acceptable and within the requirements of ABF-WPS-D1.5-1002-Repair-Revision 0. The welder was observed welding the height of the joint followed by grinding and blending of the work utilizing a small disc grinder. On a subsequent observation, this QA Inspector noted that the welding was performed in the vertical position utilizing the E9018-H4R low hydrogen electrodes. The 3.2mm 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. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempilstik Heat Indicators for verifying the preheat and inter-pass temperatures. At the time of the observation no issues were noted by the QA. On subsequent observations throughout the shift to monitor quality, it was noted that the work was completed on this date and appeared to be in general conformance with the contract documents. No RWR was required for this non SPCM first time repair.

12E PP115-BW2 (Interior)

This QA Inspector randomly observed ABF/JV qualified welder Chris Bowles #9317 perform the SMAW process in the 3G vertical position on the beam web located at 12E PP115-BW2 on the interior of the OBG. QC Inspector Salvador Merino was observed monitoring the welding on the material the pre-heat and parameters as they pertain to ABF-WPS-D1.5-1040A-Revision 1. The welder was observed drawing 135 amperes with the 3.2mm E7018-H4R electrodes and was noted as cleaning the work between passes utilizing a small disc grinder. This QA Inspector noted that the work at this location is ongoing production work and no issues were noted at the time of the observations. 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 conformance with the contract specifications.

12E PP114.5-BW3 (Interior)

This QA Inspector randomly observed ABF/JV qualified welder Deli Zhang #4735 perform the SMAW process in the 3G vertical position on the beam web located at 12E PP114.5-BW3 on the interior of the OBG. QC Inspector Salvador Merino was observed monitoring the welding on the material the pre-heat and parameters as they pertain to ABF-WPS-D1.5-1040A-Revision 1. The welder was observed drawing 135 amperes with the 3. 2mm E7018-H4R electrodes and was noted as cleaning the work between passes utilizing a small disc grinder. The welder completed face “A” of the work and back-gouged from the root side of the weld. QC performed an MT test and inspection of the joint and found no relevant indications. This QA Inspector observed the welder begin work on face “B” of the plate. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was in progress and appeared to be in general conformance with the contract

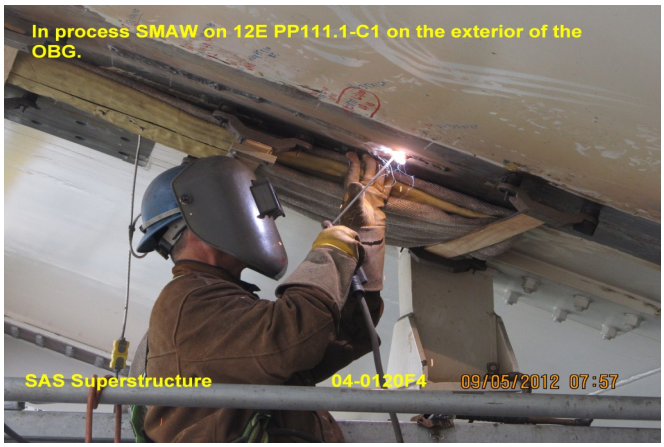
specifications.

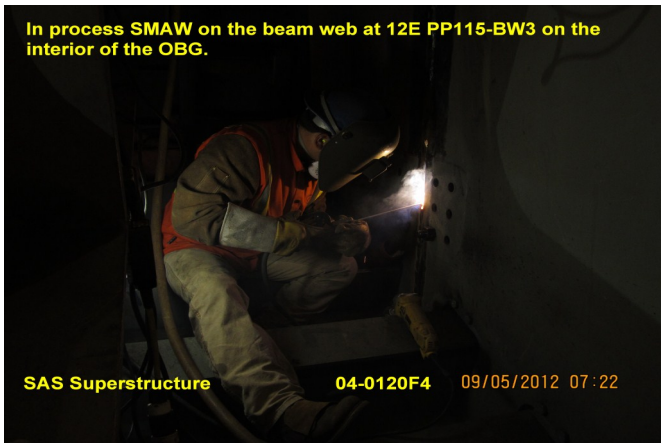
QA NDT (Exterior)

This QA Inspector performed Magnetic Particle (MT) testing on 12E PP111.1-A.1 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 6.2.1. 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.

Summary of Conversations:

Discussed testing requirements for completed welds with Quality Control Inspector Salvador Merino.





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 Gary Thomas 916-764-6027 , who represents the Office of Structural Materials for your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer