

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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016077**Date Inspected:** 04-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1300**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Jim Cunningham**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:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint E4/E5 – C1 and C2, outside the OBG section it was observed welding had been completed and ABF welding personnel Jeremy Dolman (# 5042) was moving equipment to weld E1 and E2.
- 2) At weld joint E4/E5 – F, inside the OBG section: ABF welding personnel Hua Qiang Hwang (# 2930) was grinding the completed weld in preparation for QC inspections.
- 3) At weld joint E4/E5 – B, inside the OBG section: ABF welding personnel Jin Pei Wang (#7299) was performing Flux Cored Arc Welding (FCAW) with QC Inspector Jim Cunningham present.
- 4) At OBG sections E1/E2 ABF personnel were observed setting up scaffolding and staging equipment for welding to begin on the longitudinal stiffeners. Note welding was not observed at this location this date.
- 5) This QA Inspector was informed by Lead QA Inspector Bill Levell that Structural Material Representative (SMR) Mohammad Fatemi had verbally approved the 3rd time weld repair for W1/W2-F.

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At weld joint E4/E5 – C1 and C2, outside the OBG section this QA Inspector observed welding appeared to have been completed and that ABF welding personnel Jeremy Dolman (# 5042) was moving equipment to weld E1 and E2.

At weld joint E4/E5 – F, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (# 2930) was grinding what appeared to be the completed weld in preparation for QC inspections.

At weld joint E4/E5 – B, inside the OBG section this QA Inspector observed ABF welding personnel Jin Pei Wang (#7299) performing Flux Cored Arc Welding (FCAW). Prior to the start of production welding this QA Inspector observed QC Inspector Jim Cunningham verify the following welding parameters: 231 amperes and 20.5 volts with a travel speed of 180 mm per minute. The welding observed by this QA Inspector appeared to comply with ABF-WPS-D15-3040A-3.

Inside OBG sections E1/E2 this QA inspector observed ABF personnel setting scaffolding adjacent to the longitudinal stiffeners on the outboard sections of the deck plates. ABF personnel were also staging equipment for welding. Note welding was not observed on the longitudinal stiffeners at this location during this QA Inspectors shift. This QA Inspector informed Lead QA Inspector Bill Levell of the activities observed and was instructed to contact QC Supervisor Lenard Cross and verify there were no outstanding issues regarding the pending work. This QA Inspector had a conversation with QC Supervisor Lenard Cross and Lead QC Inspector Mike Johnson regarding the following:

1. Approval of the Welding Procedure Specification (WPS) for the welding the 485W material. This QA Inspector was informed the WPS's had been approved, but the copies on site had not been stamped as being approved.

2. It was observed on the WPS's the minimum preheat was 100°C therefore the requirements in the Special Provisions outlining the method of preheating (electronic blanket) and the need to maintain the minimum preheat temperature for a minimum of 3 hours after welding was completed (including any interruptions) was discussed. Both QC Inspectors stated they were aware of these requirements.

3. Welding electrode exposure limits for 9018 electrodes being limited to 1 hour. Both QC Inspector were aware of and concurred with this requirement.

In general both QC Supervisor Lenard Cross and Lead QC Inspector Mike Johnson stated they were aware of the requirements and understand them, but implied that during previous conversations with ABF quality and production personnel there was difference in the interpretation of the requirements. Neither QC Supervisor Lenard Cross nor Lead QC Inspector Mike Johnson would specify who had a different view at this time. This information was passed onto Lead QA Inspector Bill Levell via phone shortly after the conversation above.

Summary of Conversations:

As noted above and below. Lead QA Inspector Bill Levell informed this QA Inspector via phone conversation at approximately 0940 that Structural Material Representative (SMR) Mohammad Fatemi had verbally approved the 3rd time weld repair for W1/W2-F. This QA Inspector forwarded this information on to QA Inspector Bert Madison who was covering the work at this location.

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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural

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Materials for your project.

Inspected By: Hager,Craig

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer