

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017070**Date Inspected:** 28-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

**CWI Name:** John Pagliero  
**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

**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 joints E6/E7 – C2, inside the OBG section: ABF welding personnel Xiao Jian Wan (#9677) was performing Shielded Metal Arc Welding (SMAW). QC Inspector John Pagliero was present and monitoring the work.
- 2) At weld joints E6/E7 – C1, inside the OBG section: ABF welding personnel Song Tao Huang (#3794) was performing Flux Cored Arc Welding (FCAW). QC Inspector John Pagliero was present and monitoring the work.
- 3) At weld joints E6/E7 – E1 and E2, outside the OBG section: ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) were setting up equipment for the removal of the backing bar.
- 4) At weld joints E5/E6 – D2, inside the OBG section: ABF welding personnel Fred Kaddu (#2188) was performing repair welding using the SMAW process. QC Inspector Tony Sherwood was present and monitoring the work.
- 5) At OBG section E1, West end, South side, QC Inspector Steve McConnell was performing Ultrasonic Testing

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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(UT) on the round complete joint penetration “A” deck welds.

At weld joints E6/E7 – C2, inside the OBG section, this QA Inspector observed ABF welding personnel Xiao Jian Wan (#9677) performing SMAW welding. The welding being performed was where the FCAW track system does not have access. This QA Inspector randomly observed QC Inspector John Pagliero verify the following welding parameters; 135 amperes using a 3.2 mm diameter E7018H4R electrode. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1040B Rev1. Later in the shift QC Inspector John Pagliero informed this QA Inspector welding had been completed in this area and that he had performed a preliminary visual inspection of the welding, including a 2-1/2 : 1 transition where plainer alignment occurred and requested this QA Inspector to perform a visual verification. This QA Inspector observed and informed QC Inspector John Pagliero that the weld was still in the as welded condition with several areas that appeared to need grinding, the weld joint appeared to be filled and the transition appeared to be slightly greater than 2-1/2 : 1, but that a QA verification would not be performed until QC personnel had performed and accepted the final visual inspection. QC Inspector John Pagliero marked several areas on the weld for grinding and informed welding personnel Xiao Jian Wan (#9677).

At weld joints E6/E7 – C1, inside the OBG section, This QA Inspector observed ABF welding personnel Song Tao Huang (#3794) performing FCAW using a track system. This QA Inspector randomly observed QC Inspector John Pagliero verify the base metal preheat was greater than 150° F prior to welding. This QA Inspector also observed QC Inspector John Pagliero verify the following welding parameters; 250 amperes and 24 volts at a travel speed of 362 mm per minute. QC Inspector John Pagliero informed this QA Inspector this provided a 0.995 KJ per mm heat input value which was within the ranges of the WPS. The welding randomly observed by this QA Inspector appeared to comply with ABF-WPS-D15-3040A3.

At weld joints E6/E7 – E1 and E2, outside the OBG section this QA Inspector observed ABF welding personnel Rory Hogan (#3186) and Jeremy Dolman (#5042) were in the process of setting up equipment for the removal of the backing bar on this weld.

At weld joints E5/E6 – D2, inside the OBG section, this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) was performing repair welding using the SMAW process. The repair excavation was approximately 120 mm in length and 610 mm from weld “C”. This QA Inspector performed a verification of the welding parameters observing the following; 122 amperes using a 3.2 mm diameter E7018H4R electrode. This QA Inspector also verified the preheat temperature of the base metal was greater than the minimum required by the WPS. The welding observed appeared to comply with ABF-WPS-D15-1000-Repair. This QA Inspector observed QC Inspector Tony Sherwood was present and monitoring the work. This QA Inspector asked QC Inspector Tony Sherwood the repair cycle of the welding being performed and was informed this was the third time the area had been excavated (R-3) and that Engineering approval had been obtained prior to the start of any work. This QA Inspector verified with QC Inspector Scott Croff that Engineering approval had been obtained for the third time repair at this location.

This QA Inspector observed at OBG section E1, West end, South side, QC Inspector Steve McConnell was performing Ultrasonic Testing (UT) on the round complete joint penetration “A” deck welds. This QA Inspector randomly observed the transducer placement, scanning technique and the instrument screen signals indicated the inspection was being performed in accordance with the contract requirements. This QA Inspector observed

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# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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multiple indications had been marked on the surface of the weld being inspected.

**Summary of Conversations:**

As noted above.

**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 Materials for your project.

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<b>Inspected By:</b>	Hager,Craig	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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