

**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-027348**Date Inspected:** 22-Mar-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:** Salvador Merino**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 Components**Summary of Items Observed:**

On this date, Quality Assurance Inspector (QAI) Kenneth Riley was present at the San Francisco Oakland Bay Bridge job site at Yerba Buena Island to observe erection and welding activities for the San Francisco Oakland Bay Bridge (SFOBB) project. This Quality Assurance Inspector (QAI) observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

**NDT**

This QAI observed welder Rich Garcia had completed the Complete Joint Penetration (CJP) weld joint at 13E/14E@LS6. QC inspector John Pagliero was observed performing the Magnetic Particle (MT) and Ultrasonic Testing (UT) for this weld joint in the vertical position. It was relayed to this QA inspector that weld was acceptable. This QA proceeded to perform the QA verification using the UT and MT methods. After review of this weld it was noted that the weld appeared to be within the contract documents at the time of verification. See TL-6027 and TL-6028 dated today for further information.

**Plate Stiffeners**

This QAI observed that the contractor was preparing to fit up plate stiffeners at 13E/14E @ LS 5. The material is Gr 485 plate stiffeners (ID X3847D-H & J and X4879D-H & J) the dimensions of the plate stiffeners are 18mm x 125 & 130mm x 1500mm Gr 485W. Later in the shift the welder Rich Garcia had fit the plate stiffeners to longitudinal stiffener LS-5. This QA Inspector observed that the contractor was using the thermal couplers for the pre heat at this location. The unit was set to 100 degrees C (275 degrees F) to obtain a constant heat of 100 degrees C (200 degrees F) prior to welding. The welder continued with the Shielded Metal Arc Welding (SMAW) process, with electrode E9018 for the Partial Joint Penetration weld in the overhead (4G) position, with a 3.2mm electrode

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for this location with welding amps measured at 125. The pre-heat for this location was measured at 100 degrees C (200 degrees F) using thermo-couplers which were verified using a tempstik and infrared gun by the QC. The welder was also observed by this QAI as using a chipping hammer, power grinder and power wire wheel for the interpass cleaning. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no issues were noted by the QAI.

This QAI observed welder Jeremy Dolman using the Shielded Metal Arc Welding (SMAW) process, with electrode E9018 for the Partial Joint Penetration weld in the overhead (4G) position, with a 3.2mm electrode for this location. The Welding Procedure Specification (WPS) used for this location was ABF-WPS-D15-1162-4 with welding amps measured at 125. The pre-heat for these locations were measured at 100 degrees C (200 degrees F) using thermo-couplers which were verified using a tempstik and infrared gun by the QC. The welder was also observed by this QAI as using a chipping hammer, power grinder and power wire wheel for the interpass cleaning. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no other issues were noted by the QAI except as detailed above.

This QAI observed welder Jeremy Dolman had fit up the plate stiffener at 12E/13E@LS4, the root gap for the Partial Joint Penetration weld was measured at one area as 10mm with an average of 7mm which is above the maximum 5mm allowed by the Welding Procedure Specification (WPS) ABF-WPS-D15-1162-4. The QC inspector Salvador Merino was observed taking measurements and creating a documented layout of the root gap throughout the area. The QC inspector also informed this QA inspector that he would follow up with a Non Conformance Report. The welder Jeremy Dolman continued with the Shielded Metal Arc Welding (SMAW) process, with electrode E9018 for the Partial Joint Penetration weld in the overhead (4G) position, with a 3.2mm electrode for this location with welding amps measured at 125. The pre-heat for these locations were measured at 100 degrees C (200 degrees F) using thermo-couplers which were verified using a tempstik and infrared gun by the QC. The welder was also observed by this QAI as using a chipping hammer, power grinder and power wire wheel for the interpass cleaning. The QC inspector for this location was Salvador Merino and was observed verifying and documenting the welding parameters for this location, along with overseeing the welding operations. At the time of the observations no other issues were noted by the QAI except as detailed above.

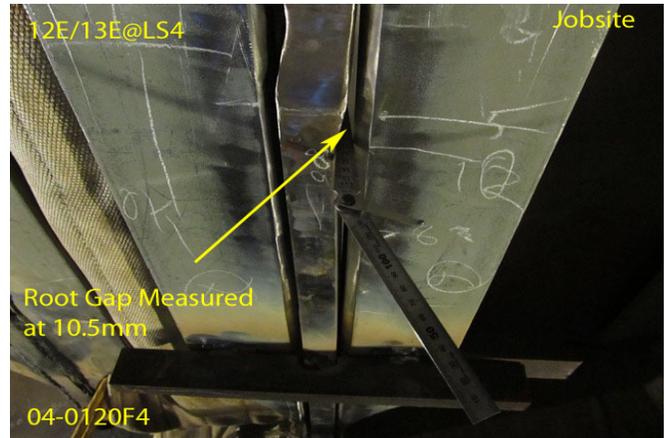
Unless noted otherwise, all work observed on this date appeared to be in general compliance with the contract documents at the time of observations.

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## Summary of Conversations:

Basic conversation, fundamental to completion of the tasks at hand, occurred between this QAI and ABF QC personnel.

## 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.

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

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