

**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-029183**Date Inspected:** 26-Mar-2013**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**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:** 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:

This QA observed the following welders working on the OBG at various locations:

This QA Inspector performed Magnetic Particle (MT) testing on the East Alignment Lug Hole (ALH) #4 and the West ALH #3. 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 6.26.2.1. A total of 100% of the welds length was tested on face A and face B. 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.

This QA Inspector performed an Ultrasonic (UT) inspection on the East Alignment Lug Hole (ALH) #4 and the West ALH #3. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The testing was performed in accordance with AWS.D1.5-2002 Section 6, table 6.3. 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.

FW Spencer welder Damien Llamas # 6645 was observed performing SMAW welding on PS3 pipe support

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bracket modifications. The welder was observed utilizing WPS FWS-PLUG/SLOT SMAW. The welder was observed preheating the welds prior to welding. Other welding parameters as inspected by the QC Inspector appeared to be in compliance with the WPS noted above. ABF-RFI-003139R00 and RFI-FWS-000117R00 were referenced during the observations. The welder completed bracket #'s 8/4/BP/SE through 31/4/BP/SE on this date.

ABF welder Mike Jimenez #4671 was observed performing ongoing weld repairs on 14W PP129.5-W2-DAH. The dimension of the excavations were recorded as  $y=2930\text{mm}-100\text{L}/24\text{W}/16\text{D}$ , at  $y=3500\text{mm}$  the dimensions of the excavation was recorded as  $80\text{L}/20\text{W}/11\text{D}$ , at  $y=3790\text{mm}$  the dimensions of the excavation was recorded as  $70\text{L}/23\text{W}/11\text{D}$ , at  $y=4000\text{mm}$  the dimensions of the excavation were recorded as  $95\text{L}/20\text{W}/14\text{D}$ , at  $1890\text{mm}$  the dimensions of the excavation were recorded as  $95\text{L}/25\text{W}/14\text{D}$  and at  $y=940\text{mm}$  the dimensions were recorded as  $85\text{L}/25\text{W}/13\text{D}$ . The welder was observed utilizing WPS ABF-WPS-D15-1004-Repair-Revision 0 for SMAW. The welder was observed preheating the welds prior to Carbon Arc Gouging and welding. Other welding parameters as inspected by the QC Inspector appeared to be in compliance with the WPS noted above.

ABF welder Wai Kit Lai #2953 was observed performing the Shielded Metal Arc Welding (SMAW) process in the 1G flat position on the Skyway East lifting rod hole #3. The welder was observed utilizing WPS ABF-D1.5-1030-Revision 1 for SMAW. The welder was observed preheating the welds prior to welding. Other welding parameters as inspected by the QC Inspector were recorded as 136 amperes and appeared to be in compliance with the WPS noted above. The 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 documents. CCO184 and RFI-003132R00 were referenced during the observations.

This QA observed QC Inspector Salvador Merino performing welding parameter checks such as voltage, amps, electrodes and preheats throughout the day. This QA also observed QC Inspector's Jesse Cayabyab performing various Non-Destructive Testing (NDT) on completed weld repairs as they became available for testing. Non-Destructive Testing methods utilized by the QC Inspectors were Visual Testing (VT), Magnetic Particle Testing (MPT) and Ultrasonic Testing Shear Wave (UTSW). QC Inspectors were observed performing inspection per applicable code and or contract criteria. Unless otherwise noted, all work observed on this date appeared to generally comply with the contract documents.

### Summary of Conversations:

Conversations were relevant to work performed.



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## 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.

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| <b>Inspected By:</b> | Frey,Doug   | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Reyes,Danny | QA Reviewer                 |

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