

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

**Report No:** WIR-028370  
**Date Inspected:** 09-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:** 1900  
**Location:** Job Site

<b>CWI Name:</b>	As noted below	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
		<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Component:</b>	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 PP116-PS1 (Interior)

This QA Inspector made random observations of ABF/JV qualified welder Jacob Stafford #8020 performing the Shielded Metal Arc Welding (SMAW) process in the 2G horizontal position utilizing E7018-H4R electrodes on the plate stiffeners located at 12E PP116-PS1 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 length 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 2G horizontal and 4G overhead positions 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 completed on this date and appeared to be in general conformance with the contract documents.

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### 12E PP113.5-FP1 (Interior)

This QA Inspector randomly observed ABF/JV qualified welder R. Alex Blanco #9650 perform the on-going in process SMAW in the 2G horizontal position on the plate stiffeners located at 12E PP113.5-FP1 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 completed on this date and appeared to be in general conformance with the contract specifications.

### 12E PP113-BW2 (Interior)

This QA Inspector randomly observed ABF/JV qualified welder Jose Torres #6235 perform the SMAW process in the 3G vertical position on the beam web located at 12E PP113-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. 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.

### 12E PP113-BW2 (Interior)

This QA Inspector randomly observed QC inspector Salvador Merino conduct fit-up operations on the beam web at 12E PP113-BW2 on the interior of the OBG. Upon a satisfactory fit-up, QC measured the pre-heat temperature and verified the parameters of ABF/JV qualified welder Deli Zhang #4735 to ABF-WPS-D1.5-1040A-Revision 1. The welder was observed welding in the 3G vertical position using E7018-H4R electrodes drawing amperage of 134. The welder was observed cleaning the work after each pass and this QA Inspector noted that there were no issues at the time of the observations. This QA Inspector made several observations to monitor quality and noted that the work was is progress and appeared to be in general conformance with the contract documents.

#### **Summary of Conversations:**

Conversations with Quality Control Inspector Slavador Merino pertaining to welder locations and testing required.

#### **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
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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