

**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-027956  
**Date Inspected:** 13-Jul-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:** 1930  
**Location:** Job Site

<b>CWI Name:</b>	As noted below	<b>CWI Present:</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No	N/A
		<b>Delayed / Cancelled:</b>	Yes	No	N/A
<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-E2.1-C (Interior)

This QA Inspector randomly observed ABF/JV qualified welder Mike Jimenez #4671 performing the Shielded Metal Arc Welding (SMAW) process in the 1G flat position on 12E-E2.1-C on the interior of the OBG. The work at this location was initiated on 7/4/2012. QC Inspector Salvador Merino was observed measuring the preheat temperature and setting the parameters to ensure compliance with the welding procedure specification (WPS) ABF-WPS-D1.5-1040C-CU. The welder was observed using a small disc grinder to blend the start/stop edges of the work to provide a smooth transition. The welder was observed utilizing 3.2mm E7018-H4R electrodes drawing amperage of 131. The electrodes were obtained from a baking oven verified by this QA Inspector. On a subsequent observation this QA Inspector monitored the work for quality and noted that it was in progress and appeared to be in general conformance with the contract documents.

This QA Inspector randomly observed ABF/JV qualified welder Jason Collins #8128 using the FCAW process in the 2G horizontal position on 12E-E2.1-C on the interior of the OBG. Work at this location was initiated on 7/5/2012. This QA Inspector observed QC Inspector Salvador Merino verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters (Amps, Volts and Travel Speed) were in accordance with ABF-WPS-D1.

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5-1-3040A-1. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes as QC measured the inter-pass temperatures with an infra-red temperature gun. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location was in progress and appeared to be in general conformance with the contract documents.

This QA Inspector made random observations of ABF welder Roby Smith #4245 performing SMAW in the 3G vertical position on 12E-E2.1-C on the interior of the OBG. The welder was observed pre-heating the Complete Penetration Joint (CJP) joint with the ProHeat 35 thermal blankets and QC Inspector Salvador Merino verified the minimum temperature requirements as pertaining to ABF-WPS-D1.5-1040C-CU. E9018-H4R electrodes were observed in use and were drawing amperage of 132. It was noted that between passes the welder ground the stop/start edges of the work for a smooth transition as QC was present to measure inter-pass temperatures. This QA Inspector randomly observed the welder throughout the shift and on a subsequent observation; the work progressed without incident and was in progress. The work at this location was found to be satisfactory and appeared to be in general compliance with the contract specifications.

This QA Inspector randomly observed ABF/JV qualified welder Richard Garcia #5892 using the FCAW process in the 2G horizontal position on 12E-E2.1-C on the interior of the OBG. Work at this location was initiated on 7/5/2012. This QA Inspector observed QC Inspector Salvador Merino verify prior to the start of welding operations, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters (Amps, Volts and Travel Speed) were in accordance with ABF-WPS-D1.5-1-3040A-1. The welder was observed grinding and blending the start/stop edges of the work utilizing a small disc grinder and compressed air in between passes as QC measured the inter-pass temperatures with an infra-red temperature gun. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location was in progress and appeared to be in general conformance with the contract documents.

### QA NDT

This QA Inspector performed Magnetic Particle (MT) testing on the welds listed below. 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. 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 approximately 10% of the welds listed below. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

13E PP123.5-BF1

13E PP124-BW1

13E PP124-BF1

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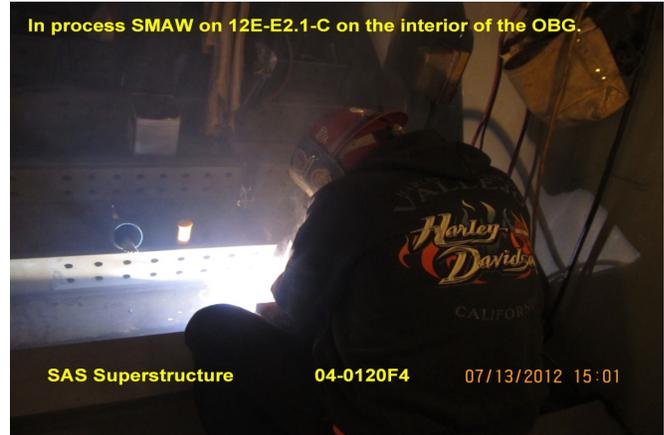
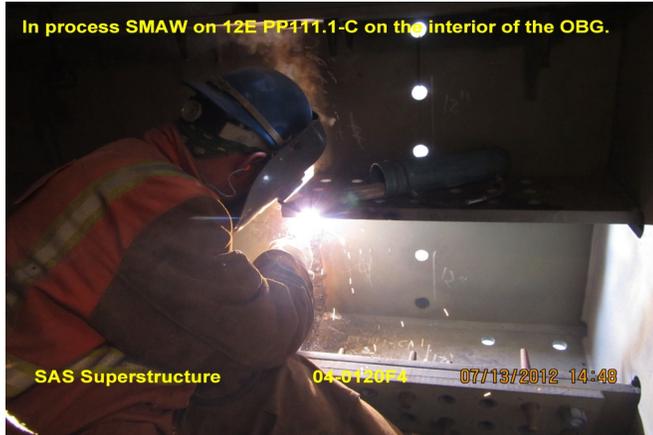
13E PP124.5-BF1-y+28 Class A rejectable indication (see UT report this date)

13E PP120.6 - y+590 Class A rejectable indication (see UT report this date)

13E PP123.6

## Summary of Conversations:

Discussed welder assignments and locations with Quality Control Inspector Slavador Merino.



## 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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**Inspected By:** Frey,Doug

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer