

**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-030107  
**Date Inspected:** 25-Sep-2013

**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:** 1730  
**Location:** Job Site

<b>CWI Name:</b>	Tony Sherwood	<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 Tower	

**Summary of Items Observed:**

Caltrans Quality Assurance Inspector Simion Ramirez (QA Inspector) arrived at job site. QA Inspector performed random QA visual testing (VT) and non-destructive testing (NDT) of ongoing ABF production work. QC Inspectors verified joint fit-up and pre-heat and checked electrical welding parameters of each welder at the start of shift and randomly until the end of shift. Welding procedure specifications (WPS) were available for reference on site. Caltrans QA Inspector random observation of quality control functions are noted below:

Tower Skirt: In Process Welding, Skirt Plate #2, Welds At Jt's #153 East Shaft, #003 Base Plate  
ABF personnel continued fit-up and welding of each partial joint penetration (PJP) and complete joint penetration (CJP) splice welds noted above. WPS #ABF-WPS-D15-2140-3 and #ABF-WPS-D15-2030-1 for flux core arc welding (FCAW) were utilized by QC Inspectors. PJP skirt plate weld passes were installed in the groove on the exterior face. Be advised that skirt plate locations where the root gap exceeds 5mm and up to 8mm maximum the contractor utilized steel backing (9mm x 38mm), in accordance with RFI# ABF-RFI-003417R02. ABF personnel ground completed PJP weld reinforcing to a flush and smooth contour.

- The weld joint fit-up and alignment was checked with a straight edge and bridge cam gauge.
- Pre-heat was performed with a rosebud torch and verified by QC with temperature stick (200°F).
- Welding was performed by approved welders (Kit Li, Rick Clayborn).
- Electrical parameter check results for Kit Li (21v / 300amps) and Rick Clayborn (19.5v / 265amps).
- The weld procedure and joint details utilized are FWT21 for PJP weld AND FWT22 for CJP weld.
- Electrode utilized is FCAW NR-232, .072" diameter.
- Weld passes were de-slagged by grinder and wire wheel.

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## Summary of Conversations:

QC informed QA that no NDT was performed on this day, and general conversation regarding the comments above.

QC fit-up performed with straight edge & Bridge Cam.



QC VT of completed CJP splice.



## 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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**Inspected By:** Ramirez, Simion

Quality Assurance Inspector

**Reviewed By:** Riley, Ken

QA Reviewer

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