

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029730**Date Inspected:** 11-Jun-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See 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:** Eastbound OBG Deck; Bikepath gate landing**Summary of Items Observed:**

At the start of shift, this Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various Complete Joint Penetration (CJP) groove welds of the East and West Orthotropic Box Girders (OBG's).

The welding was performed utilizing Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specifications (WPS's).

This QAI verified the identification and the locations of Eastbound OBG Deck top arc-strike surface discontinuities during visual scanning of the area from PP8.5 through PP77 from E2 to E5 with the AB/F Quality Control (QC) Inspector Fred Michaels. The following locations of arc-strikes were found this day: PP12.5/E5 (-2400), PP14.5/E2 (+3500), PP30.5 (-630)/E2 (+2150), PP38 (-200)/E5 (-970), PP31.5 (-560)/E5 (-2300), PP41.5/E4 (+2500), PP42.5 (+1300)/E4 (+950), PP47 (+1100)/E3 (+2550), PP52 (+1500), /E2 (+1680), PP55.5 (-970)/E2 (+1360), PP56 (+1300)/E4 (+1880), and lastly PP64 (-620)/E2 (+2150). This QAI witnessed the 'flap-wheel' sanding removal of these discontinuities and the performance by AB/F QC Fred Michels of their subsequent Magnetic Particle Testing (MPT) inspections. This QAI performed verification MPT inspection of these same removal areas. No indications were noted at this time. All the areas appeared to meet the requirements of the contract documents.

Top and bottom (2F & 4F positions) fillet welding of the gate area ledger angle to the header face of Bikepath framing at PP123 was performed by AB/F welder Jose Torres #6235 utilizing E7018 electrodes as per AB/F WPS-F1200A. The AB/F QC William Sherwood was present and monitoring the WPS parameters of the welding

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being performed. The AB/F QC had performed his final visual inspection of the above-mentioned fillet welds based on an interpretation that the design drawings were indicating a 7mm size. This QAI found the welds to be undersized based on the a 9mm weld size being shown per Sections A1 and A2 of ZPMC Bikepath Panel Assembly drawing 708R10, sheet BK5D. The AB/F QC upon re-reviewing the details confirmed consensus with this QAI's interpretation of the drawing's directive and informed AB/F that additional welding would be required to bring those welds into conformance with the contract documents.

This QAI observed the fillet welding of 4 total baseplates in progress to the Westbound OBG Suspension Cable shroud assembly as per AB/F RFI #003350R00. The baseplates are for the subsequent attachment of pipe support assemblies for the 4" diameter Compressed Air piping at the following locations: PP118.5, PP118 (+120), PP119 (-420), PP119.5 (-600). The fillet welds were performed by AB/F welder Richard Garcia #5892 utilizing E7018 electrodes as per AB/F WPSF1200A. AB/F QC Inspector Fred Michels was present, monitoring the WPS parameters of the welding in process.

This QAI performed the visual and MPT verification inspection of completed fillet welds of attachments to the top plate of Crossbeam CB19 for subsequent mounting of piping supports at the following locations: PP126(-3302)/W5(+322), PP126(+1027)/W5(+3005), PP126(+1627)/W5(+3005), PP126(+2227)/W5(+3005), PP126(+600)/W5(+2902), PP126(+600)/W5(-3152), PP126(+1130)/W5(-6010), PP126(+1835)/W5(-6510), PP126(-1460)/E5(+5146), PP126(+1198)/E5(+5908), PP126(-608)/E5(+3092), and PP126(-1019)/E5(+2954). There were no indications noted at this time. See the TL6028 Magnetic Particle Testing report. All the welds appeared to conform to the requirements of the contract documents.



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## Summary of Conversations:

### 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 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Morris, Monty

Quality Assurance Inspector

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**Reviewed By:** Reyes, Danny

QA Reviewer