

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021719**Date Inspected:** 09-Mar-2011**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:	William Sherwood and Steve Jensen			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:	Orthotropic Box Girder		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 9W/10W side plate 'E1' (0mm to 1000mm) and 'E2' (4580mm to 5278mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continuing to perform CJP groove (splice) welding fill pass to cover pass on the splice butt. The welder was observed perform manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated with propane gas torch prior welding. During welding, ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. During the shift, cover pass welding was completed on both locations and the welder has moved to 'E1' (2640mm to 5278mm) of the same OBG and set up the Bug-o track mounted nozzle holder and FCAW-G welded the root pass.

At OBG 10E/11E edge plate 'B' outside/inside, QA randomly observed ABF/JV qualified welder Fred Kaddu continuing to perform cover pass welding on the Complete Joint Penetration (CJP) splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with steel backing bar. ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder. QA

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randomly monitored the welding parameter with reading of 130 amperes which appears in conformance to the contract requirements. During the shift, SMAW cover pass welding was completed and the welder has moved inside and carbon arc the backing bar removal. The backing bar removal was completed and so with its smooth grinding. ABF QC John Pagliero performed the Magnetic Particle Testing (MT) of the backing bar removal and after its completion the welder started back welding fill pass on the butt joint. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 10W/11W bottom plate 'D' inside, QA randomly observed ABF/JV qualified welders Wai Kitlai and Hua Qiang Huang perform seal welding the bottom plates 'D1/D2' to the backing bar. The welders were utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040A-1. The joint has a single V-groove butt joint design with the bottom plate being seal welded with backing bar. The plate with the backing bar was preheated to greater than 150 degrees Fahrenheit using propane gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. The welders have completed seal welding on both sides of the plates and then hand welded using the same process the two ends (north side, 600mm and south side, 800mm) of the splice wherein the SAW track mounted feeder has a limited access.

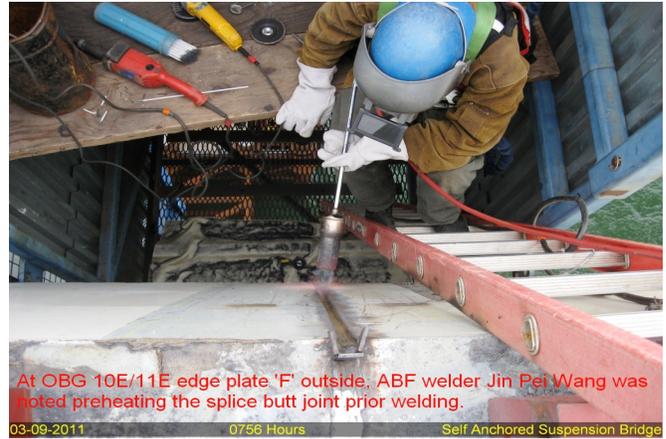
At OBG 10E/11E edge plate 'F' outside, QA randomly observed ABF/JV qualified welder Jin Pei Wang perform 3G CJP groove (splice) welding fill pass on the splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing a Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040B. The joint being welded has a single V-groove butt joint with steel backing bar. ABF Quality Control (QC) John Pagliero was noted monitoring the welding parameters of the welder. QA randomly monitored the welding parameter with reading of 138 amperes which appears in conformance to the contract requirements. During the shift while the welder was still welding fill pass on the butt joint, the welder was pulled out from this location and went to assist welding foreman James Zhen in tack welding/ fit up of the 10W/11W top deck plate 'A'.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of eight lifting lug deck access holes butt joint. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the welds and the QC inspection complied with the contract documents.

1. 4W-PP25-W3-#1 to #4 lifting lug access holes outside – QA VT/MT verified
2. 4W-PP27-W3-#1 to #4 lifting lug access holes outside – QA MT verified

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Summary of Conversations:

No significant conversation occurred today.

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 SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer