

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-028058**Date Inspected:** 26-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**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:	SAS Tower		

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 12W-W2.1 corner drop-in assembly top deck plate inside, QA randomly observed ABF/JV qualified welder James Zhen continuing to perform back welding on butt joint location Y=24300mm to Y=26800mm. The welder was noted welding in the 4G (overhead) position 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-D15-3110-4. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the steel backing bar removed and gouged using carbon air arc gouging and was ground smooth. The backing bar removal was also tested using Magnetic Particle Testing (MT). The butt joint was preheated to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket on top of the weld joint. During welding, ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. The parameters measured during welding were 260 amperes, 22.6 volts with travel speed of 180 mm per minute travel speed which are deemed acceptable to contract specifications. At the end of the shift, fill pass to cover pass was still continuing and should remain tomorrow.

At OBG 12W-W2.1 corner drop-in side plate 'C1' outside, QA randomly observed ABF/JV qualified welder Jin Pei Wang continuing to perform CJP groove (splice) back welding fill pass to cover pass on the splice butt joint from Y=28,000mm to Y=31,000mm. The welder was observed perform manual welding in the 4G (overhead)

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position utilizing a Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-Cu. The joint being welded has a single V-groove butt joint with copper backing bar that has been removed, back gouged and ground. During welding, ABF Quality Control (QC) William Sherwood was noted monitoring the welding parameters of the welder with measured working current of 128 amperes. At the end of the shift, cover pass welding at location mentioned above was completed.

At OBG 13W-W2.1 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Rick Clayborn continuing to perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repairs. The repair excavation was preheated to more than 325 degree Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blanket put in place on top of the deck prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. The repair excavation from location Y=4300mm to Y=6900mm was tested by ABF QC William Sherwood using Magnetic Particle Testing (MT) prior repair welding. At the end of the shift, repair welding was still continuing and should remain tomorrow. The welder performed Post Weld Heat Treatment (PWHT) of 450 degrees Fahrenheit for one hour as required;

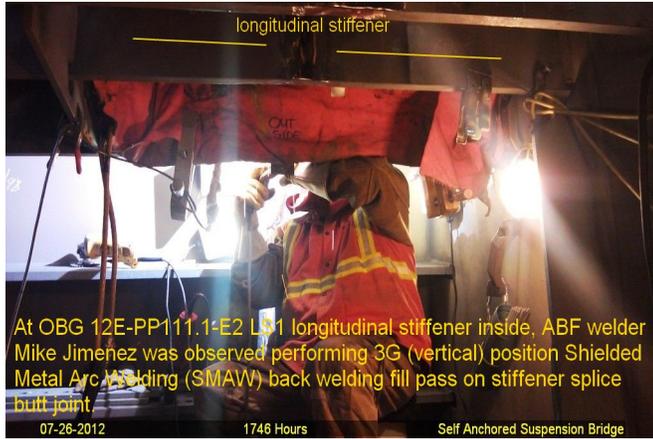
At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of drop-in top deck plate butt joints. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. 13E-PP122.2 @ 8600 – ground flush bottom weld cover QA verified
2. 13E-E2.1 @ 9500 – ground flush bottom weld cover QA verified
3. 13E-PP123.6 @ 1000 – ground flush bottom weld cover QA verified
4. 13E-E2.2 @ 4850 – ground flush bottom weld cover QA verified
5. 13E/14E-A0 @ 280 - ground flush bottom weld cover QA 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
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Reviewed By:	Levell, Bill	QA Reviewer
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