

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-020852**Date Inspected:** 14-Feb-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Steve Jensen and Fred Von Hoff	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 9E/10E side plate 'E2' inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding root pass on the splice butt joint. The welder was observed perform automatic welding in the 3G (vertical) 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-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System heater blankets located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. At the end of the shift, root pass welding was still continuing and should remain tomorrow.

QA randomly observed ABF/JV qualified welders Rory Hogan continuing to perform CJP groove (splice) back welding cover pass on Orthotropic Box Girder (OBG) 8W/9W side plate 'C2' outside. The welder was observed back 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 was remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the

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Magnetic Particle Testing (MT). The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and by moving the blanket to the side of the weld being welded during welding. The vicinity was also properly protected from wind and other climatic conditions. ABF Quality Control (QC) Fred Von Hoff was noted monitoring the welding parameters of the welder. At the end of the shift, cover pass welding completed and the welder has informed this QA that he is moving to bottom plate 'D' outside of the same OBG.

At OBG 8E/9E side plate 'C1' inside, QA randomly observed ABF/JV qualified welder Fred Kaddu perform CJP repair welding. The welder was noted welding in 3G (vertical) position utilizing SMAW with 1/8" diameter E7018H4R electrode implementing new Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1001 Repair. The welding repairs were excavated to a boat shape profile and were tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC Steve Jensen was noted monitoring the welder and his welding parameters. QA noted parameter during welding was 125 amperes which appears in compliance to the WPS. The locations of the repairs were noted below;

Location	Y-dimension	Length	Width	Depth	Remarks
1. C1	50mm	100mm	25mm	13mm	Completed
2. C1	4685mm	85mm	25mm	12mm	Completed

At Pier 7 Warehouse, continuation of the observations on the welding of Procedure Qualification Record (PQR) ABF-PQR-039-4 was turned over by fellow QA Danny Reyes. During the turn over, cover pass number 12 was ongoing and this QA carried out the observations until the final cover pass number 14 was completed. ABF QC John Pagliero performed the visual test (VT) after the welder has cleaned the weld cover of the test coupon. After QC has accepted the VT of the test coupon, this QA performed same VT and found same acceptable result.



Summary of Conversations:

At the job site, bad weather/rain were experienced and due to this, welding activities were minimal. Some of the ABF welders were sent home due to their weld locations were exposed to strong winds and rain.

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.

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Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
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Reviewed By:	Levell, Bill	QA Reviewer
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