

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-024755**Date Inspected:** 27-Jun-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 Jesse Cayabon			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 11E/12E bottom plate 'D1' (0mm to 2000mm) inside, QA randomly observed ABF/JV qualified welder Wai Kitlai perform 1G manual fill pass to cover pass welding on bottom plate 'D1' where the Submerged Arc Welding (SAW) track mounted wire feeder has limited access. The welder was 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 had a single V-groove butt joint design with backing bar. The plate with the backing bar was preheated to greater than 150 degrees Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. The measured parameters during welding were 285 amperes, 24.5 volts with travel speed of 425mm per min and calculated heat input of 0.986 Kj per mm which appears in compliance to the approved WPS. ABF welder Hua Qiang Hwang has joined Wai Kitlai in welding the splice butt joint after completing his weld joint at 'D2' of the same splice. The welders have completed the cover pass welding on both locations during the shift.

At OBG 11E/12E bottom plate 'D2' (0mm to 1000mm) inside, QA randomly observed ABF/JV qualified welder Hua Qiang Hwang perform 1G manual fill pass to cover pass welding on bottom plate 'D1' where the SAW track mounted wire feeder has limited access. The welder was 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 had a single V-groove butt joint design with

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backing bar. The plate with the backing bar was preheated to greater than 150 degrees Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC William Sherwood was noted monitoring the welder. The measured welding parameters were 290 amperes, 23.0 volts with travel speed of 465mm per min and calculated heat input of 0.86 Kj per mm which appears in compliance to the approved WPS. The welder has completed the cover pass welding during the shift.

At Tower Base Elevation 13Meters Shear Plate Electro Slag Welding (ESW);

After the Electro Slag Welding (ESW) completion of the transition weld joint N-042 at location 'J', ABF personnel were noted dismantling the Hilti MI-90 strut column and its brackets that were used to hold the water cooled weld shoes during welding and so with the access ladders. ABF personnel were noted preparing access ladders for the next new location at weld joint N-043 location 'P' which is tentatively scheduled to be welded Wednesday June 29, 2011. ABF welders Rory Hogan and Richard Garcia were noted tack welding brackets to the tower skin plate and shear plate to hold the access ladder in place. The welders were noted using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode and the plates were preheated to more than 225°F prior tack welding. ABF QC Jesse Cayabyab was noted monitoring the welders during the shift.



Summary of Conversations:

No significant conversation occurred today.

Comments

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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
