

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-027147**Date Inspected:** 06-Feb-2012**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:	Steve Jensen and Harry Scharein	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 OBG		

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 8W PP61.5 W2 deck access hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Wai Kitlai continuing to perform CJP groove welding fill pass then cover pass on the straight and curved radius butt joint. The welder was observed perform automatic welding in the 1G (flat) position utilizing a Bug-o track mounted 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-D15-3030-1. The joint being welded had a single V-groove butt joint that has been root welded without backing bar. The splice joint was preheated to greater than 150 degrees Fahrenheit using propane gas torch prior welding. During welding, ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. Measured welding parameters were 225 amperes, 22.3 volts and travel speed of 340mm per minute with calculated heat input of 0.88Kjoules per mm. At the end of the shift, cover pass welding on the curved radius of the butt joint was completed and the straight portion of the joint was still in progress.

At OBG 8W PP70.5 W2 access hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Jason Collins perform CJP groove root pass welding. The welder was observed welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1010 Revision 1. The joint being welded has a double V-groove butt joint. ABF Quality Control (QC) Jesse Cayabyab was noted monitoring the welding parameters of the welder.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Prior welding, QC has checked the fit up alignment and noted minimal misalignment. This QA verified the fit up alignment and noted the same. During the shift, root pass welding of the butt joint was completed and the welder has moved to another deck access hole location.

At OBG 7W location Panel Point PP49 grid line W2, this QA randomly observed FW Spencer qualified welder Damian Llanos perform Complete Joint Penetration (CJP) 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on the field splice butt joint of 2.5" and 4" domestic water and compressed air lines respectively. The system lines being welded are field weld joints of expansion joints along the grid line of W2 of the OBG. The welder was noted welding the root pass with 3/32" diameter E6010 electrode and followed by fill pass to cover pass using 3/32" diameter E7018H4R electrode implementing Caltrans approved procedure FW Spencer WPS 1-12-1. The welder was noted preheating and removing the moisture of the joint using a portable propane gas torch prior welding. During welding, ABF QC Steve Jensen was noted monitoring the parameters of the welder.

The welder was also noted welding pipe support PS#20 for the expansion loop. The welder was noted welding at 2F position using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode. The QC inspection was performed by Steve Jensen utilizing the Welding Procedure Specification (WPS) identified as Fillet Murex to monitor the fillet welding to verify the welding parameters. At the end of the shift, the welder has completed the splice butt joints and fillet welding of the pipe support at the following;

Line Service Line/Pipe Size Panel Point Location Joint Designation

- 1 Domestic Water 2 1/2" 49 Northwest 25/2.5/49/NW
- 2 Compressed Air 4" 49 Northwest 25/4/49/NW
- 3 Domestic Water 2 1/2" 49 Northwest 26/2.5/49/NW
- 4 Compressed Air 4" 49 Northwest 26/4/49/NW
- 5 Pipe Support W6 x 25 49 Northwest 020612-1



WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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