

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-029878**Date Inspected:** 25-Jul-2013**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:	Fred Michels and Salvador Merino			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 the bikepath emergency exits, ABF welder Rick Clayborn was observed continuing to perform the continuous fillet welding between the closure plate and bikepath handrail. The welder was observed performing the fillet welding of the 5/16" thick x 40 1/2" long closure plate at three emergency exits at panel points PP46.5-PP47, PP78.5-PP79 and PP122.5-PP123. The welder was noted using the self shielded Flux Cored Arc Welding (FCAW-S) process utilizing the 0.072" diameter E71T-8 wire electrode as per the WPS identified as ABF-WPS-D11-F2200. During welding, ABF QC Salvador Merino was noted monitoring the workmanship and welding parameters. At the end of the shift, fillet welding of the closure plate to the bikepath handrail at these three locations were completed. ABF QC Salvador Merino performed visual inspection on the completed fillet welds and noted acceptable results. This QA also performed random verification on the fillet welds and noted same results.

ABF personnel performed Procedure Qualification Record (PQR) for the 1 1/4" long x 1/4" diameter Nelson threaded stud. The PQR was performed at vertical position by ABF personnel Mike Draper. The welder welded 10 consecutive 1/4" diameter studs at vertical position with 375 amperes working current and 0.17 seconds time delay. After welding the studs, ABF QC Fred Michels performed the visual inspection for the 360 degree flash on all studs with good results. This QA also performed visual verification on the 360 degree flash on all studs and noted same results. After the visual inspection/verification, ABF QC Fred Michels performed the test on the welded studs using a calibrated torque wrench. The studs were tested at 5 foot pounds torque and noted acceptable results.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

After the completion of the PQR, ABF personnel Matt Cochran performed welder's qualification test by welding 3 1/4" diameter Nelson studs. The welded test studs also passed the 5 foot pound torque test.

FW Spencer:

Pipe Supports at W5 West bound and cross beam 19:

This QA randomly observed the installation and the fit-up of the pipe supports being welded. The tack welding and fillet welding was performed by Barry Mullaney at the west bound support and Salvador Gomez at the cross beam 19. Barry Mullaney was noted welding the angle 5" x 3" x 1/2" thick to the previously welded C15 channel for PS12 pipe support at panel point PP27 using Shielded Metal Arc Welding (SMAW) with 3.2 mm diameter E7018H4R electrode as per the Welding Procedure Specification (WPS) identified as Fillet Murex. The inspection was performed by ABF QC Salvador Merino utilizing the WPS to monitor the welding and to verify the amperage. The fillet welding of the two 5" x 3" x 1/2" thick angle to the C15 channel was completed and inspection of the welded pipe support was completed.

At the bikepath panel point PP121, this QA randomly observed FW Spencer qualified welders Tim Esquivel continuing to perform Complete Joint Penetration (CJP) 6G (all position) using the Shielded Metal Arc Welding (SMAW) process to weld root pass to cover pass on 4" diameter compressed air field butt joints. 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 the FW Spencer WPS 1-12-1. The welder was noted preheating and removing the moisture of the joint using a portable propylene gas torch prior welding. During welding, ABF QC Fred Michels was noted monitoring the parameters of the welders. At the end of the FW Spencer shift, CJP welding on 4.0" diameter pipe joints at locations mentioned below was completed.

Tim Esquivel:

1. 89/4/121/BE Compressed Air service line
2. 86A/4/121/BE Compressed Air service line



Summary of Conversations:

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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 Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Josecito	Quality Assurance Inspector
Reviewed By:	Reyes,Danny	QA Reviewer
