

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-026826**Date Inspected:** 06-Dec-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Fred Von Hoff and William Sherwood			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 14E-PP125-E4-#1 and #2 lifting lug hole infill plate to top deck plate outside, QA randomly observed ABF/JV qualified welder Erick Sparks perform CJP groove welding repair. 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-D15-1004-Repair for the Seismic Performance Critical Member (SPCM) butt joint. Prior the repair excavation, the weld butt joint and adjacent base metal were preheated to more than 225 degrees Fahrenheit using propane gas torch. After the excavation and subsequent smooth grinding, ABF QC Salvador Merino was observed performing Magnetic Particle Testing (MT) on the boat shape excavations with no significant defects noted during the test. The excavations and adjacent base metal were again preheated to more than 325 degrees Fahrenheit prior welding. ABF QC William Sherwood was noted monitoring the welder at the time of the repair. The following repair excavations were completely welded before the end of the shift and were Post Weld Heat Treated (PWHT) at 450 degrees Fahrenheit for one (1) hour as required using the Miller Proheat 35 Induction Heating System.

	Location	Y-dimension	Length	Width	Depth	Remarks
1.	14E-PP125-E4-#1	290mm	60mm	20mm	13mm	Completed
2.	14E-PP125-E4-#2	240mm	50mm	15mm	13mm	Completed
3.	14E-PP125-E4-#2	550mm	50mm	15mm	15mm	Completed

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At OBG 13E/14E bottom plate 'D1' outside, QA randomly observed ABF/JV qualified welder Wai Kitlai perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repair for the Seismic Performance Critical Member (SPCM) butt joint. The repair excavations were preheated to more than 325 degrees Fahrenheit using Miller Proheat 35 Heating Induction System with blanket located at the opposite side of the weld joint being welded. During the shift, ABF QC Fred Von Hoff was noted monitoring the welder with 130 amperes measured current on the 1/8" diameter E7018H4R electrode. The following first time repairs were noted excavated and being repaired. The completely welded repairs were Post Weld Heat Treated (PWHT) at 450 degrees Fahrenheit for one and a half (1 1/2) hour as required using the Miller Proheat 35 Induction Heating System.

Location	Y-dimension	Length	Width	Depth	Remarks
1. 13E/14E bot. plate 'D1'	7450mm		120mm	25mm	22 Completed
2. 13E/14E bot. plate 'D1'	7550mm		95mm	25mm	16 Completed
3. 13E/14E bot. plate 'D1'	8220mm		180mm	25mm	22 In progress

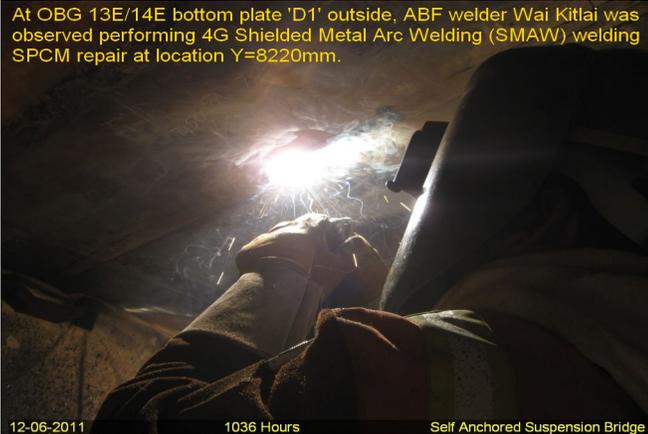
At OBG 13E/14E vertical plate 'I' outside, QA randomly observed ABF/JV qualified welder Xiao Jian Wan perform CJP groove welding repair. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1004-Repair for the Seismic Performance Critical Member (SPCM) butt joint. The repair excavations were preheated to more than 325 degrees Fahrenheit using Miller Proheat 35 Heating Induction System with blanket located at the opposite side of the weld joint being welded. During the shift, ABF QC Fred Von Hoff was noted monitoring the welder with 126 amperes measured current on the 1/8" diameter E7018H4R electrode. The following first time repairs were noted excavated and being repaired. The completely welded repairs were Post Weld Heat Treated (PWHT) at 450 degrees Fahrenheit for one (1) hour as required using the Miller Proheat 35 Induction Heating System.

Location	Y-dimension	Length	Width	Depth	Remarks
1. 13E/14E vert. plate 'I'	2710mm		125mm	25mm	12 Completed
2. 13E/14E vert. plate 'I'	3300mm		110mm	25mm	12 In progress
3. 13E/14E vert. plate 'I'	3400mm		110mm	25mm	12 Completed

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At OBG 13E/14E bottom plate 'D1' outside, ABF welder Wai Kitlai was observed performing 4G Shielded Metal Arc Welding (SMAW) welding SPCM repair at location Y=8220mm.



At OBG 13E/14E bottom plate 'D1' outside, a profile of the boat shape excavation repair was noted prior repair welding.



At OBG 13E/14E vertical plate 'I' outside, ABF welder Xiao Jian Wan was observed performing 3G Shielded Metal Arc Welding (SMAW) welding SPCM repair at location Y=3400mm of the welded splice butt joint.



At OBG 14E-PP125-E4-#2 lifting lug hole infill plate to top deck plate outside, ABF welder Erick Sparks was observed performing 1G Shielded Metal Arc Welding (SMAW) welding SPCM repair at location Y=240mm of the welded butt joint.



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