

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-028658
Date Inspected: 25-Oct-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:	Fred Michels and Barry Drake	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 12E-E2.1-C corner drop-in side plate outside, QA randomly observed ABF/JV qualified welders continuing to perform CJP groove welding repair at various Y locations. The repair welding is being performed per Caltrans approved Request for Weld Repair (RWR) #201210-013. The welders were observed manually welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 4.0mm diameter E7018H4R electrode implementing Caltrans welding procedure ABF-WPS-D15-1004 Repair. The second time repair excavations were preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System/propylene gas torch prior excavation. During the shift, ABF QC Fred Michels was noted monitoring the welders with measured working current of 165 to 170 amperes on the 4.0mm E7018H4R electrode and adjusted preheat temperature of 325°F during welding. During the shift where welder has completed the welding repair as mentioned below, ABF personnel have performed the Post Weld Heat Treatment (PWHT) of 450°F and held it for one (1) hour after welding as required. After the completion of the bake out of the just concluded repair, the welder will move to another location of the same side plate and perform the same task implementing the same WPS. Listed below were excavated and welded during the shift.

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Welder	Y-location	Length	Width	Depth	Remarks
1. Ric Chouinard	Y=1000mm	900mm	60mm	10mm	R2-completed.
2. Ric Chouinard	Y=1900	1000	60	10	R2-in progress.
3. Mike Jimenez	Y=6650	950	60	10	R2-completed.
4. Mike Jimenez	Y=5600	1000	60	10	R2-in progress.
5. Richard Garcia	Y=14500	1000	60	10	R2-completed.
6. Richard Garcia	Y=9600	1000	60	10	R2-in progress.

At OBG 12E-E2.1-@31000 corner drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Cris Bruce continuing to perform CJP groove welding first time repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder preheated the repair area and its vicinity to >150°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC John Pagliero performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. The welding repair was located at Y=8350mm and was having excavation profile of 130mm long x 30mm wide x 13mm deep.

The welder was noted using propylene gas torch to preheat the repair area and its vicinity to >150°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Cris Bruce was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans welding procedure ABF-WPS-D15-1000 Repair Rev. 2. During welding, ABF QC John Pagliero was noted monitoring the welder's welding parameter with measured working current of 127 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at the location mentioned above was completed.

FW Spencer:

At Tower location elevation 53 meter, this QA randomly observed FW Spencer qualified welder Damian Llanos continuing to perform Complete Joint Penetration (CJP) 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on 3" domestic utility water line field splice butt joints. The welder was noted welding the butt joints on one 3" diameter 45 degree elbow to 3" diameter pipe line tie-in. 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 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 Barry Drake was noted monitoring the parameters of the welder. At the end of the FW Spencer shift, CJP welding on one (1) 3" diameter domestic utility water line tie-in was completed.

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At OBG 12E-E2.1-C corner drop-in side plate outside, ABF welder Rick Clayborn was noted preheating the repair area and its vicinity to more than 225 degrees Fahrenheit prior excavation/carbon arc gouging.

10 25 2012 0927hours Self Anchored Suspension Bridge



At OBG 12E-E2.1-C corner drop-in side plate outside, ABF welder Ric Chouinard was observed continuing to perform 4G (overhead) position Shielded Metal Arc Welding (SMAW) welding repair on welded butt joint Y=1000mm.

10 25 2012 0752hours Self Anchored Suspension Bridge



At OBG 12E-E2.1-C corner drop-in side plate outside, ABF personnel were noted using the Miller Proheat 35 Induction Heating System to preheat and maintain the required temperature during SMAW repair welding.

10 25 2012 0806hours Self Anchored Suspension Bridge



At Tower elevation #3 meter, FW Spender welder Damian Llanos was observed performing 6G (all position) Shielded Metal Arc Welding (SMAW) production welding tie in joint 3" diameter compressed air-line.

10 25 2012 1031hours Self Anchored Suspension Bridge

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

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Reyes, Danny

QA Reviewer
