

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-028502**Date Inspected:** 27-Sep-2012**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:	William Sherwood and Bernie Do			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-PP116.5-E5 deck access hole inside, QA randomly observed ABF/JV qualified welder Mike Jimenez continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded butt joint. The welder preheated the repair area and its vicinity to >225°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC William Sherwood performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. This QA also performed same test verification and noted same result.

The welder was Miller Proheat 35 Induction Heating System with the heater blanket put on top of the plate to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Mike Jimenez was observed manually welding in 4G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm and 4.0mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. Welder Mike Jimenez was noted welding at location Y=3140mm to Y=4070mm. During welding, ABF QC William Sherwood was noted monitoring the welder's welding parameter with measured working current of 130 amperes on the 3.2mm and 195 amperes on 4.0mm diameter E7018H4R electrodes. At the end of the shift, repair welding at the location mentioned above was still continuing and the welder has performed the post weld heat treatment of 450°F on the

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ongoing repair using the Miller Proheat 35 Induction Heating System and held it for one hour as required.

Y-location Length Width Depth RWR# Remarks

1. 3140mm 930mm 30mm 11mm 201208-115 R2- in progress.

At OBG 12E-E2.1-@31000mm corner drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Wai Kit Lai 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.

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 Wai Kit Lai was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1000 Repair Rev. 2. During welding, ABF QC Bernie Docena was noted monitoring the welder's welding parameter with measured working current of 128 amperes on the 3.2mm diameter E7018H4R electrodes. During the shift, repair welding at the location listed below was still continuing when it was turned over to fellow QA Doug Frey for the continuance of QA observation.

Y-location Length Width Depth Remarks

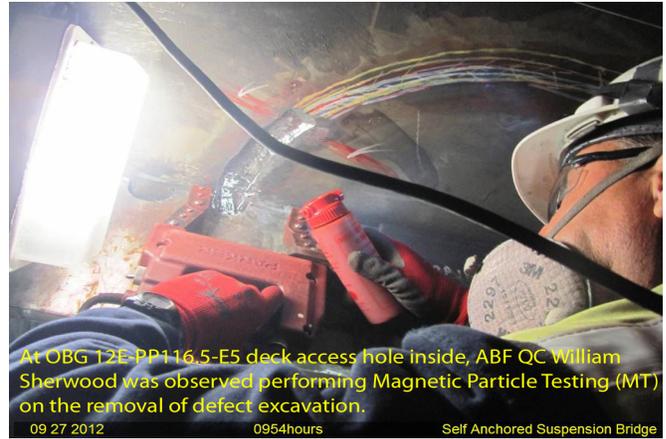
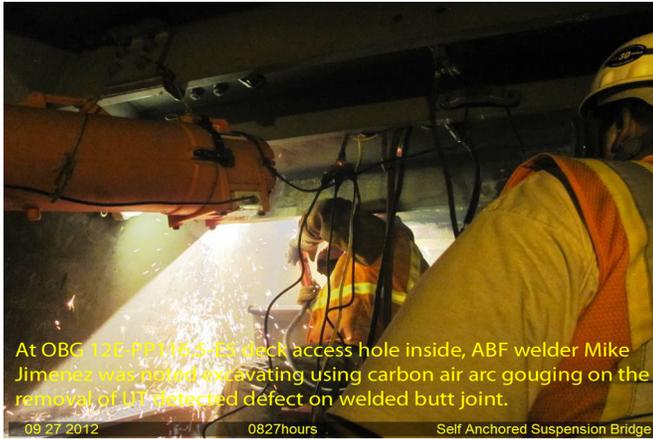
1. 15360mm 120mm 30mm 12mm In progress.

FW Spencer:

At W2 structure, this QA continue to observe the ongoing fillet welding of the utility pipe support PS-2 per Request for Information (RFI) #2939 for CCO 218. FW Spencer welder Damian Llanos was noted 2F fillet welding two (2) ½" thick stiffener plates to the web and flange on both sides of the W200 x 52 beam. The QC inspection was performed by Steve Jensen utilizing the Welding Procedure Specification (WPS) identified as Fillet Murex to monitor the tack welding and fillet welding to verify the welding parameters. The welding parameters were observed and recorded as 95 amps utilizing 2.4 mm E7018 electrodes with the welding performed in the 2F position. The 5mm fillet welded three (3) sides to the W200 x 52 beam web and flange was completed at the end of FW Spencer shift.

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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
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Reviewed By:	Levell, Bill	QA Reviewer
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