

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-028816**Date Inspected:** 26-Nov-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:	Bernie Docena 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 W2 Hinge 'K' East bound, QA randomly observed ABF/JV welder Jin Quan Huang continuing to perform ASTM A709 Grade 485W base metal repair on the Hinge 'K' box due to undercut that was previously welded on lifting lug temporary attachment. This base metal repair is being welded per Caltrans approved Request for Weld Repair (RWR) # 201211-032 dated November 14, 2012. The welder was noted welding in 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E9018H4R electrode implementing Caltrans welding procedure ABF-WPS-D15-1002 Repair. The welder was also noted performing the base metal repair at Lift Lug East # 1 and 2. Prior welding, the welder excavated the lifting lug temporary attachment removal undercut/indications using a disc grinder. ABF QC Bernie Docena was noted on site verifying the complete removal of the undercut/indications using Magnetic Particle Testing (MT). After the removal and MT verification from ABF QC, this QA performed the same test (MT) and noted same result.

The welder preheated the A709 Grade 485W base plate to 225°F using propylene gas torch. After attaining the required preheat and verification from ABF QC, the welder started SMAW welding the base metal repair. During the shift, the welder has completed the repair at East Hinge 'K' Lift Lug # 1 and 2.

At OBG 5E-PP19.5-E5 deck access hole inside, QA randomly observed ABF/JV welder Wai Kit Lai continuing to perform CJP groove welding repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic

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Testing (UT) detected defect on welded butt joint. The excavation was located at Y location 1090mm and was having an excavation profile of 100mm long x 30mm wide x 10mm deep. 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. This repair listed below doesn't need Request for Weld Repair (RWR) due to first time repair only. 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 welding procedure ABF-WPS-D15-1000 Repair. This repair was a continuation from yesterday's welding repair. During welding, ABF QC Barry Drake was noted monitoring the welder's welding parameter with measured working current of 126 amperes on the 3.2mm diameter E7018H4R electrodes. At the end of the shift, repair welding at location mentioned above was completed.

FW Spenser:

The QAI observe the ongoing installation, field fit-up and tack welding of the utility pipe support lug 5" long x 1" wide x 3/8" thick along the W5 grid line (panel point PP101). The lug pipe support was fillet welded on both sides of the 4" diameter compressed air line. 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 90 amps utilizing 2.4 mm electrodes with the welding performed in the 2F/4F positions. The tack welding/fillet welding was performed and completed by FW Spenser welder Damian Llanos. At the end of the shift, two (2) support lugs welded on 4" compressed air line were completed.



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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

Reviewed By: Reyes, Danny

QA Reviewer