

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026196**Date Inspected:** 27-Aug-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:	John Pagliero and Steve Mc Connell			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 Tower		

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 Tower Base Elevation Electro Slag Welding (ESW) T-joint E-041 location 'R', QA randomly ABF welder Richard Garcia continuing to perform 3G SMAW first time welding repair (R1) on the visually (VT) detected defect on the surface of the vertical weld of the ESW. 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-D15-1000-Repair Rev. 2. The boat shape repair excavation located at Y=2325mm to Y=2800mm was excavated to dimensions of 475mm long x 75mm wide x 40mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and this QA with positive result. The repair excavation and the adjacent base metal was preheated and maintained to more than 204°C (400°F) using Miller Proheat Induction Heating System with the heater blankets placed at the other side of the repair. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 138 amperes on a 1/8" diameter E7018H4R electrode. During the shift, cover pass repair welding was still continuing and should remain tomorrow. At the end of the shift, the welder has programmed the Miller Proheat 35 Induction Heating System to hold the preheat of 400°F for three hours and cool down at 150°F per hour as recommended by ABF.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint N-041 location 'N', QA randomly ABF welder Fred Kaddu perform 3G SMAW first time welding repair (R1) on the Ultrasonic Testing (UT) detected defect on

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

the vertical weld of the ESW. 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-D15-1000-Repair Rev. 2. The boat shape repair excavation located at Y=5065mm was excavated to dimensions of 175mm long x 45mm wide x 20mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and this QA with positive result. The repair excavation and the adjacent base metal was preheated and maintained to more than 204°C (400°F) using Miller Proheat Induction Heating System with the heater blankets placed at the other side of the repair. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 140 amperes on a 1/8" diameter E7018H4R electrode. During the shift, cover pass repair welding was completed.

After completing the welding repair at location mentioned above, the welder has moved to other location at Y=5000mm of the same ESW 'N' which was also UT detected defect on the vertical weld of the ESW. 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-D15-1000-Repair Rev. 2. The boat shape repair excavation located at Y=5000mm was excavated to dimensions of 180mm long x 45mm wide x 24mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Steve Mc Connell and this QA with positive result. The repair excavation and the adjacent base metal was preheated and maintained to more than 204°C (400°F) using Miller Proheat Induction Heating System with the heater blankets placed at the other side of the repair. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 140 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, cover pass repair welding was still continuing and should remain Monday. The welder has programmed the Miller Proheat 35 Induction Heating System to hold the preheat of 400°F for three hours and cool down at 150°F per hour as recommended by ABF.

At ESW location 'S' outside, ABF personnel Devon Murphy was noted continuing to remove the remnants of the cut strong back along the ESW vertical weld joints that were used during welding. The welder was noted using carbon air arc gouging to remove the plates remnant and its weld. After completing carbon air arc gouging, the personnel was noted smooth grinding the carbon arc gouged remnants until the end of the shift which he also completed.

All other related activities noted during the shift include three ABF QC performing Visual Test (VT) and MT on the weld cover of welded ESW at locations 'E', 'F', 'G', 'H' 'J' and 'K'. The VT/MT was partially done due to limited access on some areas which require ladder. The completely VT/MT'd areas were marked by QC for grinding due to mostly overlap with some undercut that requires fixing.

At North diaphragm below the 13Meters elevation, ABF welder Jeremy Dolman was noted tack welding temporary attachment brackets intended for access ladder. The welder was noted tack welding until the end of the shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

At Tower Base Electro Slag Welding (ESW) T-joint #E-041 location 'R', ABF welder Richard Garcia was observed performing 3G Shielded Metal Arc Welding (SMAW) welding repair on the ESW visually detected surface defect.



At Tower Base Electro Slag Welding (ESW) T-joint #N-041 location 'L', ABF welder Fred Kaddu was observed performing 3G Shielded Metal Arc Welding (SMAW) welding repair on the ESW UT detected internal defect.



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