

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-026191**Date Inspected:** 25-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**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 surface defect 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=6460mm was excavated to dimensions of 225mm long x 75mm wide x 40mm deep. The excavation was previously tested using Magnetic Particle Testing (MT) by ABF QC Fred Von Hoff 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 135 amperes on a 1/8" diameter E7018H4R electrode. During the shift, cover pass repair welding was completed including grinding/cleaning of the weld cover. 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.

After welding repair and holding the preheat of 204°C (400°F) to the repair location mentioned above, the welder has moved to another repair location Y=2325mm to Y=2800mm of the same ESW joint location 'R'. QA

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

randomly ABF welder Richard Garcia perform 3G SMAW first time welding repair (R1) on the visually detected surface defect 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 located at Y=2325mm 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 verified by 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 135 amperes on a 1/8" diameter E7018H4R electrode. During the shift, fill pass repair welding was still continuing and the observation of the job was turned over to Lead QA Danny Reyes for the remainder of the shift.

At Tower Base Elevation Electro Slag Welding (ESW) T-joint N-041 location 'N', QA randomly ABF welder Jeremy Dolman continuing to perform 3G SMAW first time welding repair (R1) on the Ultrasonic Testing (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 located at Y=7000mm was excavated to dimensions of 210mm long x 45mm wide x 40mm deep. The excavation was tested using Magnetic Particle Testing (MT) by ABF QC John Pagliero 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 area. During the shift, ABF QC John Pagliero was noted monitoring the welder. Measured welding parameter during welding was 115 amperes on a 1/8" diameter E7018H4R electrode. During the shift, cover pass repair welding was completed including grinding/cleaning of the weld cover. The welder has programmed the Miller Proheat 35 Induction Heating System to hold the preheat of 204°C (400°F) for three hours and cool down at 150°F per hour as recommended by ABF.

The welder has moved to ESW T-joint #W-041 location 'W' and performed a minor weld cover pick up using the same process mentioned above. The weld cover touch up welding was completed.

At ESW locations 'N' and 'W' 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. The work is still in progress.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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