

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029021**Date Inspected:** 18-Jan-2013**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:** William Sherwood**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 the Tower Base, Electro Slag Weld (ESW) "V" weld joint #W-043 face B, ABF welder Chris Bruce was observed performing repair welding of the weld cover pass of the previously welded ESW located at Y=7610mm where the welder had left off yesterday, Thursday January 17, 21013. The welder was noted utilizing Shielded Metal Arc Welding (SMAW) with 4mm diameter E7018H4R electrode as per the WPS ABF-WPS-D15-1000 Repair Rev. 3. The welding parameters were measured and noted during the welding was 187 amperes. This weld repair is being performed per Request for Weld Repair (RWR) #201301-027. During the shift, ABF QC William Sherwood was noted monitoring the welding parameters and workmanship of the repair being welded. The repair welding at this location was completed and the welder performed the Post Weld Heat Treatment (PWHT).

The PWHT on the repair at ESW "V" Y=7610 was completed and the welder was noted moving to combined excavation of Y=9600mm and Y=9490mm. The same welder Cris Bruce was noted performing the 3G welding repair on combined excavation just mentioned using the same process and implementing the same procedure until the end of the shift. Since the repair was not completed, ABF personnel still performed the PWHT of 350°F with cooling rate of 75°F per hour as required.

At Tower Base Electro Slag Weld (ESW) 'V' weld joint #W-043 face A, ABF welder Erick Sparks was observed perform excavation on previously welded ESW from Y=7775mm to Y=7795mm due to UT reject. Prior to the

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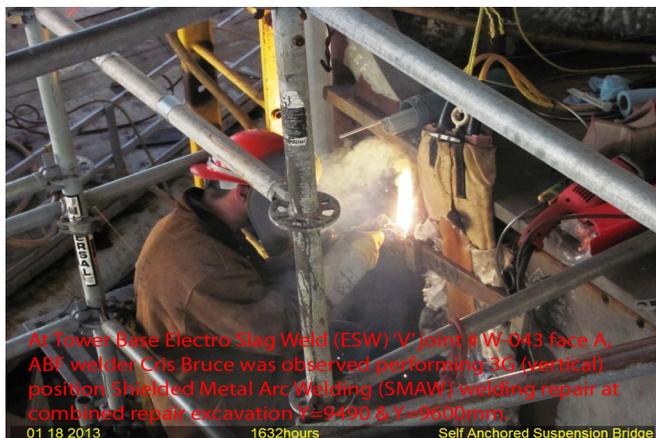
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excavation, the welder was noted preheating the repair area to more than 350°F using Miller Proheat 35 Induction Heating System with the heater blanket placed on the outside. After the excavation, ABF QC William Sherwood performed the Magnetic Particle Testing (MT) where the excavation that has dimensions of 110mm long x 40mm wide x 40mm deep with no relevant indications noted. This QA also performed the same test (MT) and found same result. This repair excavation has an approved RWR# 201301-028. The excavation was completed and tested but left it for welding repair later.

The welder has moved to the same ESW but different Y location where he excavated another UT detected defects at Y=9600mm and Y=9490mm. The same excavation procedure as mentioned above was followed but only combining the two locations into one excavation. After the completion of the carbon air arc gouging and smooth grinding on the groove of the excavation, ABF QC William Sherwood performed MT on the excavation that has profile dimensions of 260mm long x 45mm wide x 50mm deep with no relevant indications noted during the test. This QA also performed the same test (MT) and found same result.

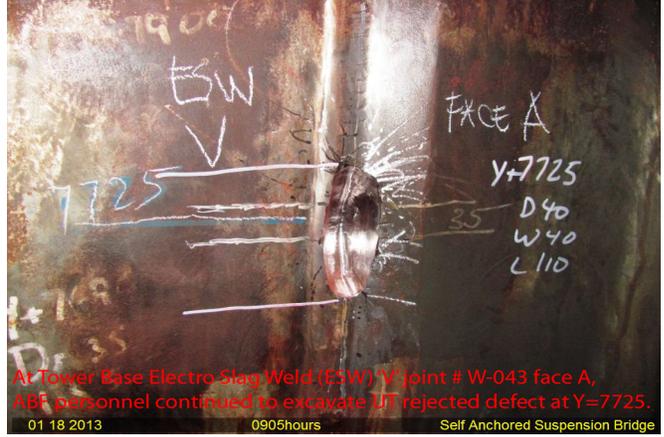
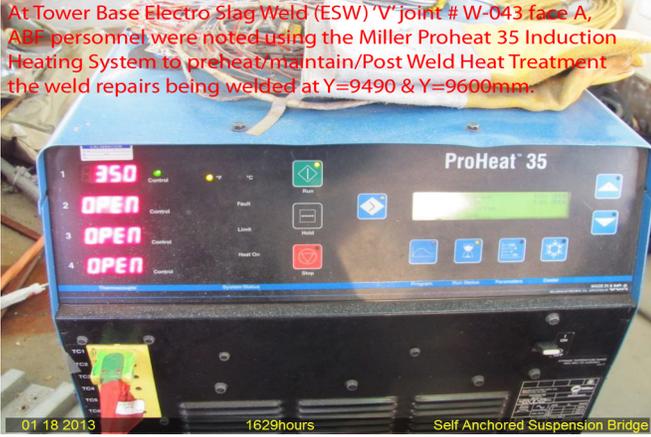
At Tower Base Electro Slag Weld (ESW) 'F' weld joint #E-045 face A, ABF personnel was observed continuing to perform exploratory excavation on welded ESW at location Y=9620mm due to UT detected defects. The ABF personnel have started the exploratory excavation from the surface but to go 3mm increments up to 18mm then 1mm after that till they reach the detected defects. This new exploratory procedure is per ABF Engineer Daryll Peterson instruction to ABF personnel including QC. The personnel were noted using only the disc grinder in every 3mm increments of excavation. ABF QC Steve Jensen was observed performing Magnetic Particle Testing (MT) on the following various depths with indications stated below. This QA also performed the same test and noted same result. During the shift, the ABF personnel was only managed to excavate up to 3mm deep. The shift was completed up to this depth of excavation.

1. At 0mm/surface – no significant indications noted.
2. At 3mm deep - no significant indications noted.



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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