

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-025363**Date Inspected:** 26-Jul-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:** 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 13Meters Shear Plate Electro Slag Welding (ESW);

This QA was present at the Tower Base to observe the Electro Slag Welding of the weld number E-041 located at 'R' position per ABF weld map. The weld joint to be welded is a 60mm shear plate to 60mm Tower skin plate 'E' T-joint at corner 'D' and 'E' of Tower East Shaft. ABF intends to implement Caltrans approved welding procedure ABF-WPS-ESW-120T in performing the ESW.

Upon QA's arrival, ABF personnel were noted preparing to weld the shear plate butt joint by checking all the necessary electrical and water hose weld shoe cooling connections are all in place prior to commence ESW. The cooling water hoses were noted new with the ½" diameter supply line rated 200 psi while the ½" diameter return line was rated 250 psi. The weld shoes that will be used today were also sent for machining to a nearby shop to fix for possible fitting leakage and returned with new fittings. It was noted that three weld shoes were in position at each opposing side of the joint and so with the consumable guide tube that was placed in between the joint gap which was separated by consumable ceramic insulators. Other ABF personnel that were noted assisting the preparation of the ESW include ABF Senior Field Engineer Daniel Hester and Dr. Dan Danks of Oregon Institute of Technology.

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The fit up alignment was previously checked by ABF QC Jesse Cayabyab and this QA. The root gap was measured from bottom to top and the result noted was 17 mm minimum and 23.4 mm maximum which deemed in compliance to the WPS.

At 1330 hours, ABF Operations Superintendent Dan Ieraci and ABF QC Steve Jensen performed the check list verification and noted it was all OK.

At 1345 hours, all ABF personnel involved in the ESW converged and performed a pre-operations meeting reminding each and everyone's role in performing their job. After the meeting, each personnel went to their own respective assignment and positioned themselves and got ready for the start.

Initial firing of the ESW has started at 1435 hours but this was considered false start due to one filler wire was not moving and got stuck somewhere inside the consumable guide tube. ABF personnel momentarily stopped the operation and fixed the filler wire issue. After fixing and checking the filler wire, ABF has re-started the ESW at 1441 hours but again it was a false start due to same problem. ABF personnel tried again to fix the issue until 1500 hours when ABF Superintendent has decided to abort the operation and informed his personnel to perform the ESW tomorrow.



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