

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-025392**Date Inspected:** 03-Aug-2011**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:	Steve Mc Connell and Steve Jensen			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 13 Meters after the Electro Slag Welding (ESW) of eight (8) butt joints and twelve (12) T-joints, ABF personnel were noted cutting the run off tabs welded on each joint. The personnel were noted using the carbon air arc gouging in removing the run off tabs on top of the joints. After each tab removal, other ABF personnel were behind to grind smooth the rough surface of the top joint.

During the run off tab removal, ABF personnel have noted a slight to severe undercut that was caused by the Electro Slag Welding at the top of the weld. This could be due to the high temperature generated by the molten flux during the ESW and that the end welding was not covered by molten metal.

Due to severity of the undercut that ranges from 1mm to 13mm, ABF has decided to fix the undercut by grinding them smooth, test with Magnetic Particle Testing and perform the repair. ABF welders were noted welding the undercut repairs using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing Caltrans approved Welding Procedure Specification ABF-WPS-D15-1000 Repair. The base metal was preheated to more than 300°F using propylene gas torch prior welding. During the repair welding, ABF QC Steve Jensen was noted monitoring the preheat and welding parameters of the two welders. ABF welder Jeremy Dolman was noted having a 110 amperes on a 1/8" diameter electrode while Richard Garcia was noted having 123 amperes on the same electrode.

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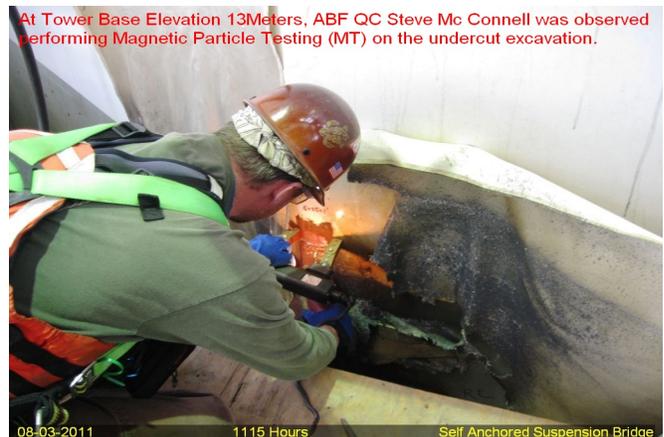
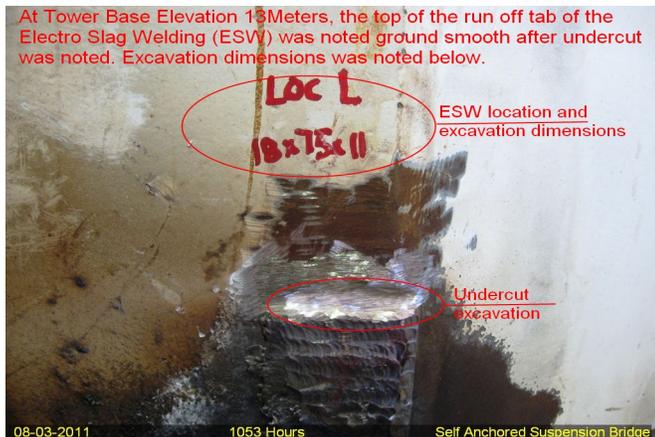
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The following ESW weld locations were run off tab removed and noted with undercut right at the top where the ESW welding was terminated. The weld undercut were excavated and repaired as noted below.

ESW Weld Location Excavation Dimension (L x W x D) Magnetic Particle Testing Remarks

1. 'R' (E-041) 75mm x 15mm x 10mm MT Passed Repair complete.
2. 'J' (N-042) 65mm x 20mm x 7mm MT Passed Repair complete.
3. 'G' (S-045) 53mm x 20mm x 11mm MT Passed Repair complete.
4. 'L' (S-042) 75mm x 18mm x 11mm MT Passed Repair complete.
5. 'E' (N-045) 60mm x 10mm x 2mm (Welded August 2, 2011)
6. 'F' (E-045) 60mm x 10mm x 2mm (Welded August 2, 2011)
7. 'M' (W-042) 25mm x 6mm x 1mm MT Passed Repair complete
8. 'S' (S-041) 65mm x 10mm x 3mm MT Passed Excavated only.
9. 'W' (W-041) 75mm x 16mm x 13mm In Progress Excavated only.

Other related activities noted during the shift include tack welding of 3" x 3" angular to tower vertical stiffeners. ABF welder Rory Hogan was noted tack welding the angulars using 1/8" diameter E7018H4R electrode. These tack welded angulars were intended to be used as an access platform in preparation for cutting the 45 degree bevel of the 80mm thick shear plate on the East side.



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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 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
