

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-027924**Date Inspected:** 09-Jul-2012**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:** Bernie Docena**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 Electro Slag Weld (ESW) location 'V' face A (W-043), QA randomly observed ABF/JV qualified welder Xiao Jian Wan continuing to perform CJP groove welding repair. The welder was observed manually welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1000 Repair Rev. 2. The repair excavation was preheated and continuously maintained to more than 350 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior/during welding. The ESW repair being welded is located at ESW 'V' face A, Y=4550mm to Y=4750mm was having dimensions of 200mm long X 60mm wide X 55mm deep is a continuation repair from face A due to linear indication that was left during previous MT. This repair has been approved per Request for Welding Repair (RWR) #201206-042. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 125 amperes. During the shift, repair welding at location mentioned above was completed. The welder held the same preheat of 350°F on the repair for three hours after welding as required.

Location	Weld No.	Y-dim.	Length	Width	Depth	Remarks
2. 'V'	W-043	4580mm	200mm	60mm	55mm	In progress.

At Tower Base Electro Slag Weld (ESW) location 'E' face A (N-045), QA randomly observed ABF/JV qualified

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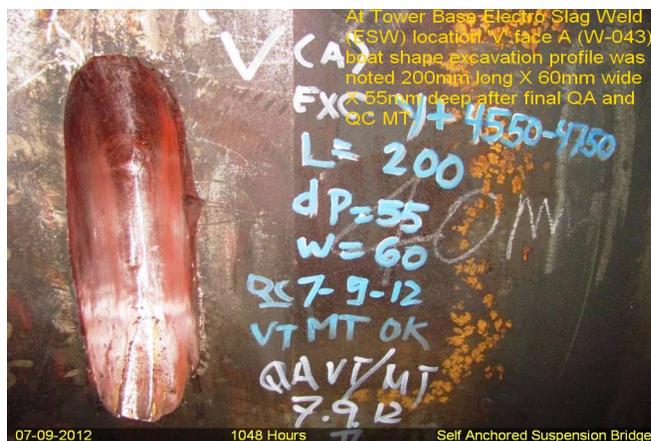
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welder James Zhen continuing to perform CJP groove welding repair. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a Bug –o track mounted dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3000-3 Repair. The repair excavation was preheated and continuously maintained to more than 350 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior/during welding. The ESW repair being welded is located at ESW ‘V’ face A, Y=7600mm to Y=9850mm having dimensions of 2250mm long X 60mm wide X 40mm deep. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 260 amperes, 23.2 volts with travel speed of 220mm per minute and calculated heat input of 1.65Kjoules per mm. At the end of the shift, 3G FCAW-G repair welding at location mentioned above was still continuing and should remain tomorrow. The welder held the same preheat of 350°F on the combined excavation repair for three hours after welding as required.

Location	Weld No.	Y-dim.	Length	Width	Depth	Remarks
2. 'E'	N-045	7600mm	2250mm	60mm	40mm	In progress.

At Tower Base Electro Slag Weld (ESW) location ‘T’ face A (S-043), QA randomly observed ABF/JV qualified welder Lou Xiao Hua continuing to perform CJP groove welding repair. The welder was observed manually welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-1000 Repair Rev. 2. The repair excavation was preheated and continuously maintained to more than 350 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior/during welding. The ESW repair being welded is located at ESW ‘T’ face A, Y=2850mm having dimensions of 200mm long X 50mm wide X 52mm deep has been approved per Request for Welding Repair (RWR) #201206-051. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 115 amperes. At the end of the shift, repair welding of the weld joint/location mentioned above was completed and the welder held the same preheat of 350°F on the repair for three hours after welding as required.

Location	Weld No.	Y-dim.	Length	Width	Depth	Remarks
2. 'T'	S-043	2850mm	200mm	50mm	52mm	Completed



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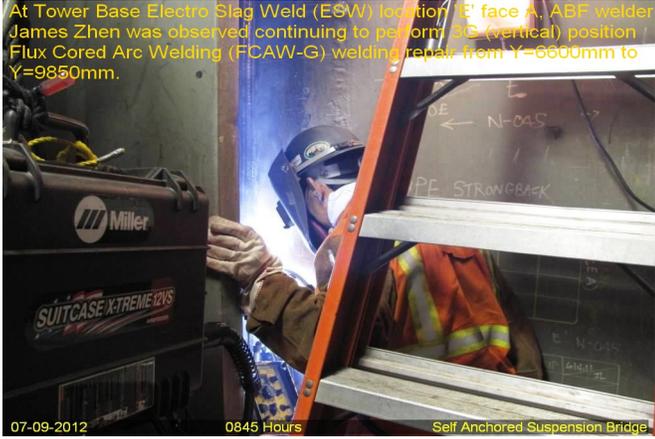
# WELDING INSPECTION REPORT

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At Tower Base Electro Slag Weld (ESW) location 'E' face A, ABF welder James Zhen was observed continuing to perform 10B (vertical) position Flux Cored Arc Welding (FCAW-G) welding repair from Y=6600mm to Y=9850mm.



## 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.

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<b>Inspected By:</b>	Lizardo, Joselito	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell, Bill	QA Reviewer

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