

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-027557**Date Inspected:** 04-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1200**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**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 13 meter outer East external diaphragm, QA randomly observed ABF/JV qualified welder James Zhen perform Partial Joint Penetration (PJP) T-joint welding fill pass on 80mm thick shear plate to 45mm thick diaphragm plate weld joint #W102. The welder was observed welding in the 2G (horizontal) position utilizing a 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-D15-3160-1. The welder was using a track mounted welder holder assembly that was remotely controlled. The PJP T-joint was supposed to be preheated to greater than 325 degrees Fahrenheit using Miller Proheat 35 Induction Heating System with the heater blankets located on top of the plate prior welding. During welding, ABF Quality Control (QC) Fred Von Hoff was noted monitoring the welding parameters of the welder. Measured welding parameters during welding were 235 amperes, 23 volts and 325mm travel speed. Calculated heat input was 0.998 Kjoules/mm which appears in compliance to the contract requirements. At the end of the shift, FCAW-G fill pass welding was still continuing and should remain tomorrow. The welder held the preheat using the same Miller Proheat 35 Heating System for three hours after welding as required.

At Tower Base 13 meter external diaphragm ABF personnel were noted cutting the run off tab on welded corner stiffener plates at various locations using carbon air arc gouging in cutting the run off tabs. Other ABF personnel followed the gouged run off tabs and ground smooth the gouged areas and corners of the plates. At the end of the

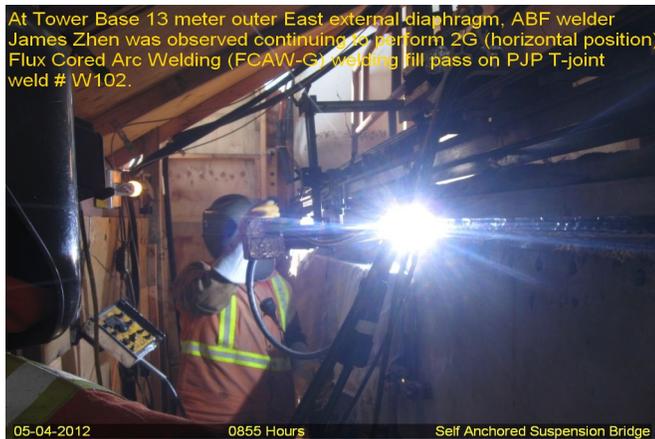
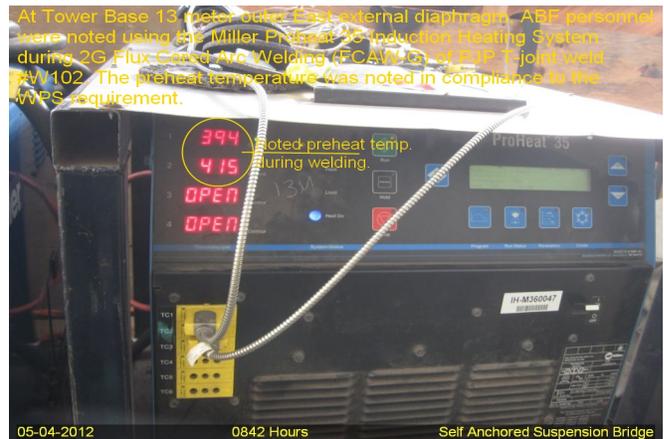
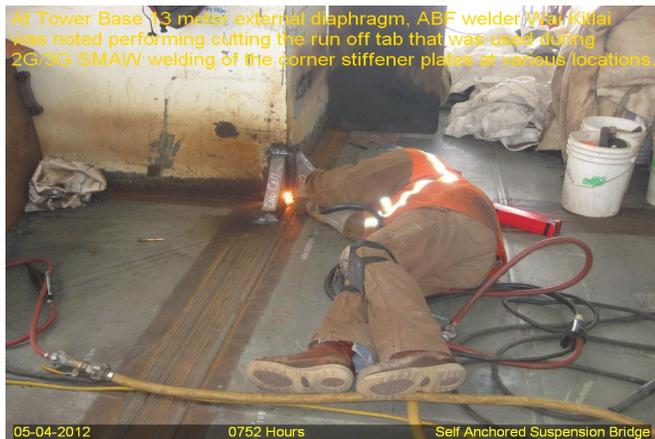
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shift, carbon arc cutting on the corner stiffener plates run off tabs were still continuing and should remain tomorrow.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the fillet welding of one (1) stiffener joint. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector at 9 meter diaphragm meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. Weld joint P440-4 fillet weld joint – weld cover QA verified



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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Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer