

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002563**Date Inspected:** 07-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wu Ming Kai and See Below**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:** See Below**Summary of Items Observed:**

This Caltrans Quality Assurance (QA) Inspector, M. Paul Stovall, was present at Zhenhua Port Machinery Company (ZPMC) on Changxing Island, Shanghai, China to monitor the Quality Control (QC) functions during the fabrication of the Self Anchored Suspension (SAS) and Orthotropic Box Girder (OBG) section of the San Francisco/Oakland Bay Bridge.

New Tower Shop, Bay 1

The QA Inspector observed ZPMC welding personnel Bi Changyou, ID #040380 using the Shielded Metal Arc Weld (SMAW) process to perform a repair weld on 89-meter Mock-Up weld number MUSB-MA21-A/J-70. The work observed appeared to comply with Welding Procedure Specification (WPS) WPS-345-SMAW-2G (2F)-FCM and the contract documents.

OBG Pre-Assembly Area, Bay 2

The QA Inspector observed that grinding was in progress on the fillet welds attaching the Lug to Diaphragm and Lug to Stiffener on the 77-meter Mock-Up.

Bay 3

The QA Inspector observed ZPMC personnel grinding the flame cut ends of W21 x 57's and the faying surface of various flame cut WT stiffeners.

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The QA Inspector observed ZPMC welding personnel Sun Tiyu, ID #054459 use the Flux Cored Arc Welding (FCAW) process for the welding of Complete Joint Penetration (CJP) splices on various W21 x 57's. The QA Inspector observed ZPMC welder He Yumei, ID #048625 use the FCAW process to tack weld run off tabs onto the flanges of various W21 x 57's.

Bay 4

The QA Inspector observed ZPMC personnel preparing to begin preheating Tower Internal Diaphragm weld joint number SSD1-SA27-A/B-1A. The QA Inspector observed that prior to the start of the preheating process the root opening was approximately zero (0) for the length of the joint. ZPMC personnel started using oxy-acetylene torches on the top and bottom surfaces to preheat the weld joint. During this process, the root opening increased to approximately 6 millimeters at one end and as the material cooled, the opening would decrease returning to approximately a 0.5-millimeter root opening. At this point ZPMC personnel stopped work. The QA Inspector observed ZPMC Certified Welding Inspector (CWI) Zhu Zhong Hai was present and monitoring the process.

Bay 7

The QA Inspector observed that ZPMC welding personnel performing FCAW of fillet welds on Floor Beams. This work included tack welding and production welding of stiffener plates on Floor Beams (FB) FB003-02, FB022-02, FB026-02, and FB025-02. The QA Inspector verified the welding parameters specified in WPS-B-P-2132-3, and WPS-B-P-2112-FCM, as 294 amperes and 30.8 volts. The work observed appeared to comply with the contract requirements.

Summary of Conversations:

The QA Inspector had no significant conversations.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Stovall,Paul	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer
