

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-001531**Date Inspected:** 15-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**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:** OBG**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Production Monitoring test (PMT) and Fabrication

The QA inspector performed random fit-up verifications to the PMT coupons and Deck Panel DP-58 at the junction of the U-ribs to deck plate. The QA found that U-ribs fit-up appeared to be in compliance with the contract documents.

However the U-rib bevel surface had sign of rust, fins and tearing. ZPMC had been notified of these issues but ZPMC had not made proper corrections on the preparation of the bevel surfaces.

The test started at approximately 0910 hours. The QA inspector witnessed the welding operations at the PMT at the junction of the 800 mm U-ribs and the deck plate.

The QA inspector observed welding operators Han Chang Hou welder ID # 059464, Chen Jie ID # 059468, Gao Xin Dong ID # 059361, Jian Ting Guang ID # 062265, Zhao Cheng Shuang ID # 059400 and Yuan Fen Chuan ID # 059355 performing welding operations on the root pass of the weld joints # 1 thru 6 respectively with the automatic Gantry Lincoln machine with the gas metal arc welding (GMAW) process on the metal transferring with spray transfer mode following the (WPS) WPS-B-T-2342-U1 (Urib). ZPMC had approximately one (1) control panel Operator, six (6) Welders, five (2) QC inspectors, two (2) QC representative, two (2) Supervisor and six (6) Grinders. ABF representative Warren Buelher, ZPMC representatives Mr. Lay Tao and Caltrans representatives Mr. Robert Cuellar, Mr. Alistair Melville, Mr. Ady Velasco, Mr. Larry Viars were present at the OBG fabrication shop.

ZPMC proceed welding the root pass from deck panel DP-15 without finishing with the PMT coupons at the

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ZPMC risk.

The QA inspector observed ZPMC performing welding operations at the root pass on the Deck panel DP-15 with the automatic Gantry Lincoln machine with the gas metal arc welding (GMAW) process following the (WPS)WPS-B-T-2342-U1(Urib) for the GMAW process on the metal transferring with spray transfer mode.

ZPMC QC inspector Certified welding inspector Sun Wei performed visual weld inspection to the root pass.

ZPMC found that welds were in accordance with the contract documents.

The QA inspector observed that ZPMC was performing welding operations on the cover pass with the submerged arc welding (SAW) process following the WPS-B-T-2322-U1 (Urib). The QA inspector performed random verifications for the amperages, voltages and travel speed with the assistances of Caltrans representative Mr. Larry Viars. The welding parameters recorded by the QA inspectors appeared to be in general compliance with the contract documents.

Note: ZPMC proceed welding the root passes and cover passes from deck panel DP-58 without finishing with the PMT coupons on their own risk.

The welding operators welding on the production deck panel DP-58 were as follows:

Weld joint (WJ) # 1 and 3, Han Chang Hou, WJ # 2 and 4; WJ # 5 and 7 Gao Xin Dong; WJ # 6 and 8, Jiang Tin Guang, WJ # 9 Zhao Cheng Shuang and WJ# 10 Yuan Fen Chuan and the control panel operator was Li Xi De

Summary of Conversations:

As noted above.

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:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
