

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-003005**Date Inspected:** 20-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**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:** Tower**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.

The QA inspector observed ZPMC performing layout, cutting, beveling, milling, fitting and welding activities in bay # 1 and 2 on Tower Assembly shop.

Skin A North lift # 1

The QA inspector observed ZPMC welding operator Liu Zhen Hong (0503060) performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S in the flat (1G) position at the weld joint # NSD1-SA-33 A/J-25B longitudinal Stiffener (butt joint). The QA inspector performed random welding parameters verifications. The QA inspector found that the welding parameters appeared to be in compliance with the contract documents.

Longitudinal stiffener for Skin A East lift # 1

The QA inspector observed ZPMC welder Zhang Bing Hua performing welding operations with the flux cored arc welding (FCAW) process using the WPS-B-T-2231-B-U3-F in the flat (1G) position at the weld joint ESD1-SA-107 D/J-7A longitudinal stiffener splice (butt joint). The QA inspector performed random welding parameters verifications. The QA inspector found that the welding parameters appeared to be in compliance with the contract documents.

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The QA inspector observed that ZPMC cut three welds (partially welded) on longitudinal stiffeners weld splices at the joints # ESD1-SA-227-A/H-51,52 and 53. ZPMC informed that weld splices were cut because ZPMC found that milling could not be achieved after assembling. An incident report was issued before in a previous occasion.

The QA inspector witnessed QC inspector Manei Xuhai performing magnetic particle testing(MT) to 7 weld splices for the longitudinal stiffener A1 at the lift # 1 on East skin A. Mr. Manei Xuhai's MT examinations appears to be in compliance with the contract documents.

QA Ultrasonic testing (UT)

The QA inspector performed ultrasonic testing (UT) at the completed joint penetration at the skin and longitudinal plates splices, weld joints # ESD1-SA80-B/E-10A; ESD1-SA-80-B/E-9A, ESD1-SA216-A/K-18A, ESD1-SA216-A/K-18A, ESD1-SA216-K/K- 25, ESD1-SA-107-F/J-1A, 2A, 7A, 8A, 14A, 21A and 26A. The QA inspector performed 10 % UT at random location. The QA inspector found that welds areas tested appeared to be in compliance with the contract documents. See UT report TL_6027 generated on this date.

The QA inspector witnessed ZPMC's heat straightening operations on the plate # P1271(S). ZPMC appeared to be applying heat in accordance with ZPMC internal heat straightening request HSR1 (T)-2433 on a skin plate (with recorded 4 mm deformation).

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:	Cochran,Jim	QA Reviewer
