

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-006090**Date Inspected:** 05-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** 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:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors Mr. Chen Xing, Mr. Lia Zhong An, Mr. Tin Dong Liang

On this date CALTRANS OSM Quality Assurance (QA) Inspector Mr. Paul Dawson arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

This QA Inspector observed ZPMC welder Mr. Yuan Binbin, stencil 052894 is using shielded metal arc welding procedure WPS-B-P-2112-(2F) to tack weld ND1-A468-33M-26B strut assembly plates. Prior to welding the QA Inspector observed the base material was preheated using a torch and Mr. BinBin was verifying the stiffener plate was properly aligned where the tack welds were to be made and that the base material had been preheated to a minimum of 110 degrees Celsius as required by the welding procedure. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Ms. Zhang Lingling stencil 207746 is using welding procedure specification WPS-B-T-2221-B-S2 to make submerged arc groove weld NSD1-FESA3-1B/C-14B. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and that the base material appears to be between 110°C and 230°C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Zhu Zhongyun, stencil 057194 is using flux cored welding procedure WPS B-T-2231-TC-P5-F to make stiffener plate to tower skin plate weld NSD1-SA3-Z/G-8A. The QA

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Inspector observed that the base material had been preheated using a electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel measuring Mr. Zhu Zhongyun having a welding current of approximately 330 amps and 31.9 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC Ultrasonic Inspectors performing ultrasonic inspections of north tower lift 2 Skin plate C stiffer to skin plate complete joint penetration repair welds 2, 10, 11, 12, 13, 26 and 28. ZPMC wrote "UT Accept" on base material adjacent to each of these welds. The QA Inspector reviewed the ZPMC Notification of Witness Inspection documents that have recently been submitted to Caltrans QA and it appears that none of these welds have been submitted for QA Inspections. About 20 minutes later ZPMC personnel used overhead cranes to turn this skin plate over with the ribs facing down. With the skin plate in this position QA has limited access to complete ultrasonic inspections of the welds that had been accepted by ZPMC personnel.

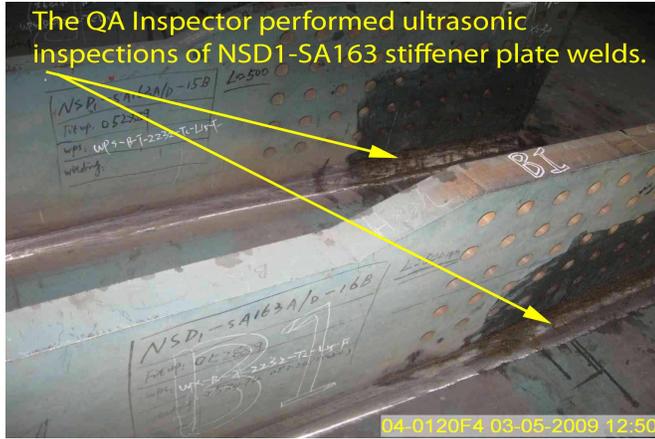
The QA Inspector observed four ZPMC welders using flux cored welding procedure WPS B-T-2231-TC-P5-F to make stiffener plate to tower face A base shear plate A24-1 welds. Ms. Wu Zhizhong, stencil 057180 was welding ND1-A24A/B-1, Mr. Yu Jun, stencil 201825 was welding ND1-A24A/B-2, Mr. Tao Qian, stencil 0400457 was welding ND1-A24A/B-5, Mr. Jiand Zhou, stencil 040261 was welding ND1-A24A/B-6. The QA Inspector observed the base material had been preheated using electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel measuring the welding current and voltage for each of these welders. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Mr. Chang ChuanGang, stencil 053870 is using flux cored welding procedure WPS B-T-2231-TC-P5-F to make stiffener plate to tower skin plate weld ND1-SA223-E/E-15B. The QA Inspector observed the base material had been preheated using electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel had measuring Mr. Chang ChuanGang having a welding current of approximately 330 amps and 31.9 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Mr. Yu Chaoye, stencil 053870 is using flux cored welding procedure WPS B-T-2231-TC-P5-F to make stiffener plate to tower skin plate weld ND1-SA223-D/E-10A. The QA Inspector observed the base material had been preheated using electrical heater elements. The QA Inspector observed ZPMC Quality Control personnel had measuring Mr. Yu Chaoye having a welding current of approximately 300 amps and 31.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

See 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 Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
