

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-006968**Date Inspected:** 03-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**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:** OBG and Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Mr. Yu Qi Guo

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:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP151-001, DP539-001, DP233-001, DP422-001, DP315-001, DP342-001, DP178-001, DP476-001 and DP260-001.

Tower Bay 11

The QA Inspector issued an incident report with the following wording which was submitted to Caltrop Task Leaders Mr. Mahlon Lindenmuth and Mr. William Clifford:

Caltrans Quality Assurance Inspector observed ZPMC personnel performing welding of West Tower, Skin A, Lift 3 stiffener welds WSD1-FASA3-2A/C-35B, WSD1-FASA3-2A/C-60B and WSD1-FASA3-2A/C-6B without the

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required base material preheat on all three welds. The photograph below shows an unmelted 110 degree Celsius temperature indicating crayon adjacent to weld WSD1-FASA3-2A/C-60B. ZPMC QC and ABF were informed and electrical heaters were used to preheat the base material prior to resumption of welding.

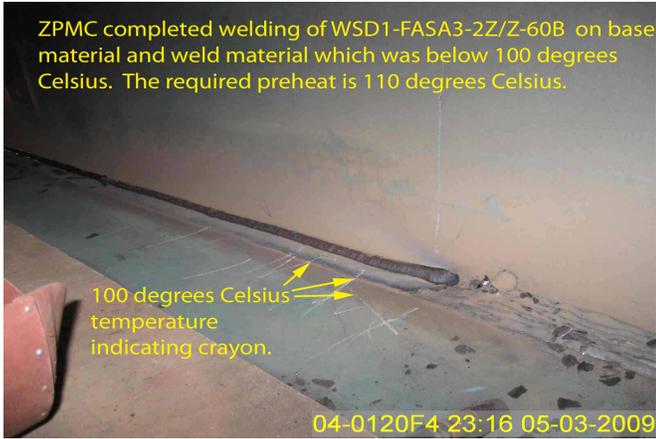
This QA Inspector observed ZPMC welder Mr. Zhang Bing Hua, stencil 053316 is using flux cored welding process WPS-B-T-2231-TC-U5F to make stiffener plate welds on tower skin plate WSD1-FASA3-2A/C-35B. The QA Inspector observed ZPMC Quality Control Inspector Mr. Tao Hai monitoring this welding. The QA Inspector measuring Mr. Zhang Bing Hua having a welding current of approximately 330 amps and 33.5 volts. The QA Inspector observed electrical heating elements underneath the stiffener where this welding is being performed and the electrical power cables were not connected to these electrical heating elements. The QA Inspector asked Mr. Tao Hai what is the minimum base material temperature that is required by the welding procedure specification and Mr. Tao Hai said the base material needs to be at least 110 degrees Celsius. The QA Inspector measured the base material with a 110 degree and a 100 degree Celsius temperature indicating crayon and observed the base material adjacent to the weld is below 100 degrees Celsius. Items observed by this QA Inspector do not appear to be progressing in compliance with project specifications and an incident report was issued to document this procedure violation.

This QA Inspector observed ZPMC welder Mr. Xu Changhong, stencil 040611 is using flux cored welding process WPS-B-T-2231-TC-U5F to make stiffener plate welds on tower skin plate WSD1-FASA3-2A/C-60B. The QA Inspector observed ZPMC Quality Control Inspector Mr. Tao Hai monitoring this welding. The QA Inspector measured a welding current of approximately 320 amps and 32.0 volts. The QA Inspector observed electrical heating elements underneath the stiffener where this welding is being performed and the electrical power cables were not connected to these electrical heating elements. The QA Inspector measured the base material with a 110 degree and a 100 degree Celsius temperature indicating crayon and observed the base material adjacent to the weld is below 100 degrees Celsius. Items observed by this QA Inspector do not appear to be progressing in compliance with project specifications and an incident report was issued to document this procedure violation.

This QA Inspector observed ZPMC welder Mr. Zhao Guiting, stencil 040723 is using flux cored welding process WPS-B-T-2231-TC-U5F to make stiffener plate welds on tower skin plate WSD1-FASA3-2A/C-6B. The QA Inspector observed ZPMC Quality Control Inspector Mr. Tao Hai monitoring this welding. The QA Inspector measured a welding current of approximately 320 amps and 32.0 volts. The QA Inspector observed electrical heating elements underneath the stiffener where this welding is being performed and the electrical power cables were not connected to these electrical heating elements. The QA Inspector measured the base material with a 110 degree and a 100 degree Celsius temperature indicating crayon and observed the base material adjacent to the weld is below 100 degrees Celsius. Items observed by this QA Inspector do not appear to be progressing in compliance with project specifications and an incident report was issued to document this procedure violation.

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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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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