

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-006092**Date Inspected:** 07-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. Wu Ming Kai, Mr. Lia Huaije

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:

Tower Bay 10

This QA Inspector observed ZPMC welder Mr. Wang Chong, stencil 062199 is using shielded metal arc welding procedure WPS-B-P-2113-(3F) to tack weld WD1-A467-23M-4-1A strut assembly plates. During this tack welding the QA Inspector observed the base material at approximately 60 mm from where the tack welding was being made was approximately 60 degrees Celsius. The WPS requires a minimum preheat temperature of 110 degrees. The QA Inspector informed CWI Mr. Wu Ming Kai that the base metal adjacent to where Mr. Wang Chong had been welding appears to have been partially preheated but the required minimum temperature of 110 degrees Celsius did not appear to have been reached prior to welding. Mr. Wu Ming Kai reminded the welders to verify the base material temperature prior to welding. Items observed by the QA Inspector do not appear to fully comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Wang Chong, stencil 062199 and Ms. Guo Liang preparing to tack weld WD1-A467 Shear Link stiffener plates. The QA Inspector verified both welders have ZPMC welder

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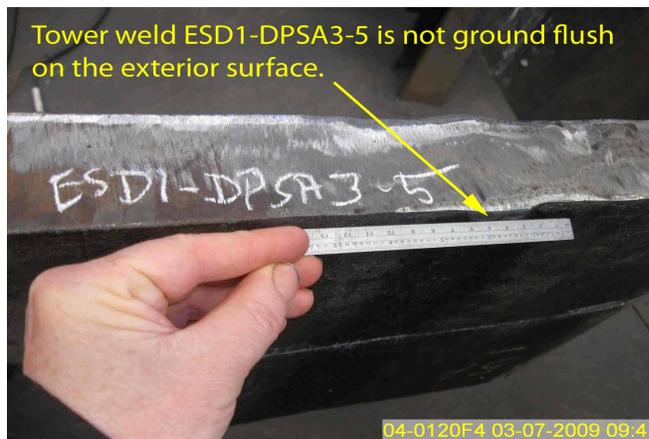
identification cards that indicate they are certified to tack weld in the 2F and 3F positions.

OBG Bay 5

This QA Inspector performed random visual inspection of tower diaphragm weld ESD1-DPSA3-18-5 and observed that the exterior top end of the weld has a weld reinforcement of approximately 3 mm. The design drawing for this weld requires the weld to be flush on the exterior surface. The QA Inspector informed ZPMC CWI Mr. Liu Huanije that this weld does not appear to be flush on the upper end. Mr. Liu Huanije said another CWI had visually inspected these welds and that he will have the weld ground to a flush condition. Following completion of the grinding flush of weld #5, this QA Inspector performed random ultrasonic (UT) inspections of approximately 10 percent length of tower diaphragm welds WSD1-SA360-E/F-4, WSD1-SA360-D/F-17 and WSD1-SA360-D/F-20. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel and the welds are listed on ZPMC Notification of Witness Inspection document 002178. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report and the photographs below.

Tower Bay 10

This QA Inspector performed random ultrasonic (UT) inspections of approximately 10 percent length of East Tower Lift 3 Skin plate C stiffener to skin plate welds NSD1-SA171C/D-2, NSD1-SA171A/D-10, NSD1-SA171A/D-11, NSD1-SA171A/B-12, NSD1-SA171A/D-13 and NSD1-SA171A/D-27. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that was ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.



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.

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