

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-001219**Date Inspected:** 13-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2400**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 and OBG Fabrication**Summary of Items Observed:**

Caltrans 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:

Orthotropic Box Girder (OBG) and Tower Mock Up:

CWI Inspectors: Li Yi Feng, Chen Xi, Sha Zhi

New Tower Fabrication Shop:

The QA Inspector observed ZPMC welder Mr. Xu Changxue stencil 66002 is using welding procedure WPS-B-T-4313-TC-P4-1 using the shielded metal arc process to make a partial penetration groove weld on 89' mockup MUB-MA21 weld #A/J9. The QA Inspector observed THJ506Fe-1, 4.0 mm diameter electrodes and a welding current of approximately 165 amps. The QA Inspector observed that near the bottom of the weld joint the weld bevel and the adjacent base material within approximately 40 mm of the weld is at the required base material preheat temperature of 110°C and the base material beyond approximately 30 mm distance is below 110°C degrees. The QA Inspector informed ZPMC QC/CWI Inspector Li Yi Feng that the base material adjacent to weld #A/J9 is not heated to a minimum temperature of 110°C for a distance of 75mm from the weld bevel. Mr. Li Yi Feng informed the QA Inspector all welding will stop until the base material is heated to the required temperature. Items observed by the QA Inspector do not appear to fully comply with project specifications. See the photograph

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below for additional information.

The QA Inspector observed ZPMC welder Mr. Tan Xaingbo stencil 66459 is using welding procedure WPS-B-T-4313-TC-P4-1 using the shielded metal arc process to make a partial penetration groove weld on 89' mockup MUB-MA21 weld #G/J10. The QA Inspector observed THJ506Fe-1, 4.0 mm diameter electrodes a welding current of approximately 180 amps and the adjacent base material is at the required preheat temperature of 110°C. Items observed by the QA Inspector appear to comply with project specifications.

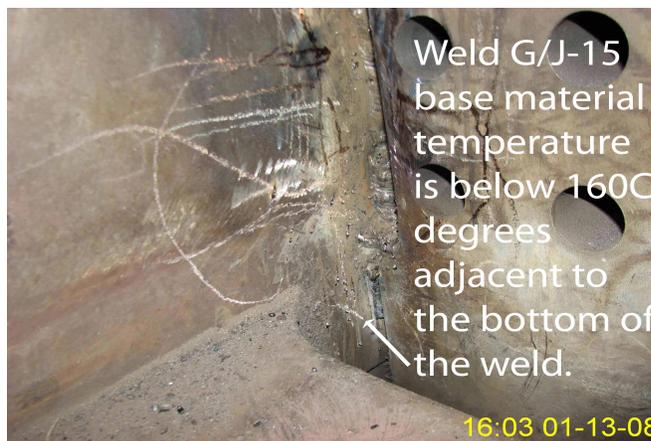
ZPMC QC Inspector Mr. Fu Yuhong informed the QA Inspector that ZPMC QC Inspector Mr. Cai Xinxin has accepted magnetic particle inspections of root pass welds MUB-MA21 A/J09; A/J10; A/J15; A/J16; G/J09; G/J10; G/J15 and G/J16. The QA Inspector performed magnetic particle inspection of these eight root pass welds and items observed appear to comply with project specifications. See the photograph below for additional information.

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The QA Inspector observed ZPMC welder Mr. Chang Chuan Gang stencil 53870 is using welding procedure WPS-B-T-2232-TC-P4-F using the flux cored welding process to make a groove weld on 114' tower mockup MUB-M121 weld groove weld MUC-E2-28. The QA Inspector observed a 1.4 mm diameter E71T-1 roll of electrode being used that had been marked as being installed on the welding machines earlier today. The QA Inspector observed a welding current of approximately 310 amps, 32.5 volts and the base material has a minimum preheat temperature of 110° C. Items observed by the QA Inspector appear to comply with project specifications.



Root welds G/J-15 and G/J-16 were MT'd by the QA Inspector



Summary of Conversations:

See above for summary of conversations.

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.

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Inspected By: Dawson,Paul

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer