

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-007626**Date Inspected:** 21-Jun-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 Inspectors: Mr. Xu Le Feng, Mr. Zheng Bo

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. This QA Inspector observed the following:

Tower Bay 10

ZPMC issued "Inspection Notification Sheet" #3488 informing QA that ZPMC has completed ultrasonic inspections of tower welds NSD1-FDSA4-3A/C-5A-2; NSD1-FDSA4-3A/C-8; NSD1-FDSA4-3A/C-10; NSD1-FDSA4-3A/C-5A-14; NSD1-FCSA4-1A/C-57; SSD1-FCSA4-1A/C-53; SSD1-FCSA4-1A/C-54; SSD1-FCSA4-1A/C-55; SSD-FESA4-1A/F-10; SSD-FESA4-1A/F-11, NSD1-FESA4-3A/F-9; NSD1-FESA4-3A/F-14; NSD1-FESA4-3A/F-18; NSD1-FESA4-3A/F-23; SSD1-FDSA4-1C/C-19 and SSD1-FCSA4-1B/C-9. ZPMC ultrasonic Inspectors had previously accepted all of these welds. This QA Inspector performed random ultrasonic inspections of the welds listed above and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. This QA Inspector observed weld NSD1-FDSA4-3A/C is also listed on this 'Inspection Notification Sheet' and ZPMC is performing submerged arc welding adjacent to this weld and due to the preheating of the base material this QA Inspector was not able to perform ultrasonic inspections of this weld. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

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This QA Inspector observed ZPMC welder Ms. Cao Xiachua, stencil 056975 using submerged arc welding procedure specification WPS-B-T-2221-C-U2B-S to make groove weld WSDI-FDSA4-4D/D-3B. This QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 620 amps and 31.0 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Li Xiaoqing, stencil 044560 using submerged arc welding procedure specification WPS-B-T-2221-C-U2B-S to make groove weld WSDI-FDSA4-4D/D-17B. This QA Inspector observed Quality Control personnel monitoring the base material temperature and other welding attributes. This QA Inspector measured a welding current of 630 amps, 31.5 volts and a welding travel speed of 517 mm per minute. Items observed on this date appear to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Cui Guozhong, stencil 040626 is using shielded metal arc welding procedure WPS-BT-3211-TC-U5b to make a groove weld on shear link WDI-SA250-65M-1-1B. This QA Inspector observed ZPMC QC personnel measuring a welding current of 187 amps. Prior to welding This QA Inspector observed ZPMC personnel to be using torches to preheat the base material where the weld is to be made and the electrodes are being stored in a portable heated rod oven. Items observed on this date appear to generally comply with applicable contract documents.

OBG Bay 3

ZPMC issued "Inspection Notification Sheet" #3488 informing QA that ZPMC has completed ultrasonic inspections of OBG floor beam welds FB010-034-045, FB010-040-045, FB015-043-045 and FB015-046-045. ZPMC ultrasonic Inspectors had previously accepted all of these welds. This QA Inspector performed random ultrasonic inspections of the welds listed above and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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| Inspected By: | Dawson,Paul | Quality Assurance Inspector |
| Reviewed By: | Carreon,Albert | QA Reviewer |
