

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-013869**Date Inspected:** 07-May-2010**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**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hui, Mr. Luan Zhao Gang, Mr. Qiu Wen

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:

Yard, Front of Bay 16

This QA Inspector observed ZPMC welder Mr. Hu Yacheng, stencil 049339 has recently used shielded metal welding process WPS-B-P-2111-TC-U4b-FCM-1 to make OBG segment 10BE welds SEG064D-125 and -126.

This QA Inspector observed ZPMC QC personnel have recorded a welding current of 141 amps and Mr. Hu Yacheng appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Hai Jun, stencil 201087 has recently used shielded metal welding process WPS-B-P-2111-TC-U4b-FCM-1 to make OBG segment 10BE welds SSD20-PP103-133 and -134.

This QA Inspector observed ZPMC QC personnel have recorded a welding current of 143 amps and Mr. Wu Hai Jun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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OBG Bay 14

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 has used submerged arc welding procedure WPS-B-T-2221-B-U2C-S-2 to make OBG segment weld SEG3005*-006. This QA Inspector observed ZPMC Quality Control Inspector Mr. Tao Wei has recorded a welding current of 622 amps and 30.0 volts and Ms. Wang Lanying appears to be certified to make this weld. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Li Jun, stencil 051348 is using shielded metal arc welding process to make temporary alignment plate welds on the underside of the weld joint between deck plate DP3047-001 and DP3043-001. This QA Inspector observed Mr. Li Jun appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder stencil 204330 is using the shielded metal arc welding process to make a 2F (horizontal) tack weld between segment 12CE panel point 117 deck panel diaphragms and the floor beam. Welder stencil 204330 showed this QA Inspector his identification card which lists the stencil number shown above, but the welder did not appear to have a typical ZPMC green colored SFOBB welder identification card. ZPMC QC Inspector Mr. Wang Xu informed this QA Inspector the reason that welder stencil 204330 does not have a typical welder identification card is due to ZPMC computer problems. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

Tower Dock

This QA Inspector observed ZPMC welder stencil 500331 is using the shielded metal arc welding process to make north tower weld NSD1-SA11-D/F-12 on the skin plate of North tower lift 1. As this QA Inspector approached this area where the welding was taking place, welder stencil 500331 stopped welding and left the area. This QA Inspector asked ZPMC QC Inspector Mr. Zing Qin Shun which welding procedure specification was being used to make this weld and Mr. Zing Qin Shun informed this QA Inspector that WPS-B-T-2233-TC-U5F was being used. This QA Inspector later determined that this WPS provides welding parameters for the flux cored welding process and does not address use of the shielded metal arc welding process. Items observed by this QA Inspector appear do not appear to fully comply with project specifications.

Segment Trial Assembly

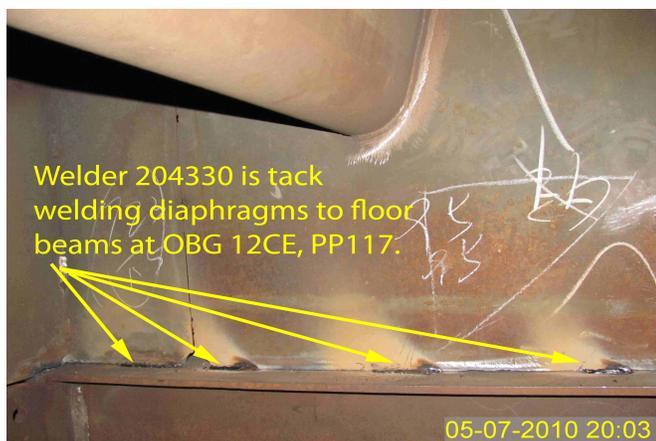
ABF issued "Inspection Notification Sheet" number 05072010-1 item #1 informing QA that on 05-07-2010 at 21:30 hours ABF Inspectors will be performing ultrasonic (UT) inspections of repaired weld CA040-004 which joins OBG segment 7CE deck plate and edge plate on the bikepath side. This weld is located in the trial assembly area. Caltrans QA Inspector Mr. Mike Hasler was informed by ABF/Sense UT Inspectors that the repair areas at 11690 mm and 9320 mm are UT rejectable and the other weld repairs are acceptable. This QA Inspector performed ultrasonic inspections of the four locations listed on ABF UT report UT-7E-032R5 dated 04-30-2010 the repair locations as listed on the UT report data sheet for detection of longitudinal and planar transverse indications utilizing scanning patterns A, B, C and D (AWS D1.5 Fig 6.7) and no additional UT rejections were observed. Items observed on this date appeared to generally comply with applicable contract documents. Note:

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These inspections are being documented and tracked on "Verification Witness Request" documents. See the TL-6027 UT report for additional information concerning this inspection.

ABF issued "Inspection Notification Sheet" number 05062010-2 item #1 informing QA that on 05-07-2010 at 18:00 hours ABF Inspectors will be performing ultrasonic (UT) inspections of repaired weld OBE8B-004 and OBE8B-005 which joins OBG side plates between segments 8AE and 8BE. These welds are located in the trial assembly area. Caltrans QA Inspector Mr. Mike Hasler had been informed by ABF/Sense UT Inspectors that the repair areas are UT acceptable. This QA Inspector performed ultrasonic inspections of the seven locations listed on ABF UT report UT-8E-027 dated 05-02-2010 for detection of longitudinal and planar transverse indications utilizing scanning patterns A, B, C and D (AWS D1.5 Fig 6.7) and no UT rejections were observed. Items observed on this date appeared to generally comply with applicable contract documents. Note: These inspections are being documented and tracked on "Verification Witness Request" documents. See the TL-6027 UT report for additional information concerning this inspection.



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:	Carreon,Albert	QA Reviewer
