

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-013926**Date Inspected:** 08-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**Summary of Items Observed:**

CWI Inspectors: Mr. Zhu Zhong Hui, Mr. Zhou Chen

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:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Sun Gusong, stencil 058592 has recently used shielded metal arc welding process to make tack welds between deck plate DP3028-001 longitudinal diaphragms and floor beams near OBG segment 12CE panel point PP117. This QA Inspector observed Mr. Sun Gusong 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. Xi Xianyou, stencil 047866 is using flux cored welding procedure WPS-B-T-2231-TC-U4b-F to make OBG segment 12CW corner assembly repair weld CA3010-003. ZPMC QC Inspector Mr. Zhong Yong Gang showed this QA Inspector a weld repair document that listed this weld but the weld repair document and the attached ultrasonic report do not have any tracking number date or other information to allow tracking of these repairs. This QA Inspector observed that Mr. Xi Xianyou appears to be certified to make this weld. This QA Inspector observed a welding current of approximately 290 amps and 31.5 volts. Items observed on this date do not fully appear to comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 is using flux cored welding procedure WPS-B-T-2231-TC-U4b-F to make OBG segment 12CW corner assembly repair weld CA3008-003. ZPMC QC Inspector Mr. Zhong Yong Gang showed this QA Inspector a weld repair document that listed this weld but the weld repair document and the attached ultrasonic report do not have any tracking number date or other information to allow tracking of these repairs. This QA Inspector observed that Ms. Hue Junrong appears to be certified to make this weld. This QA Inspector observed a welding current of approximately 295 amps and 31.6 volts. Items observed on this date do not fully appear to comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Wang Lanying, stencil 045265 is using submerged arc welding procedure WPS-B-T-222(2)1-T-2 to make OBG segment weld SEG3006*-003. This QA Inspector observed ZPMC Quality Control Inspector Mr. Zhong Yong Gong has recorded a welding current of 638 amps and 33.0 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. Zhou Zhenyuan, stencil 202805 has recently used shielded metal arc welding process to make temporary alignment plate welds on the top side of weld SEG3004*-021 which joints deck plates DP3046-001 and DP3045-001. This QA Inspector observed Mr. Li Jun appears to be certified to make this weld and the welding electrodes are being stored in a portable electrode storage oven that is warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zang Chang Ming, stencil 047864 is using shielded metal arc welding procedure WPS-B-P-2214-B-U2-FCM-1 to make segment 11DW weld SEG071E-070 near panel point 105. This QA Inspector observed Mr. Zang Chang Ming has a welding current of approximately 160 amps and Mr. Zang Chang Ming appears to be certified to make this 4F (overheat position) weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Lv Fengbao, stencil 045175 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make segment 11DW weld SEG071E-160 near panel point 105. This QA Inspector observed ZPMC QC has recorded a welding current of 205 amps and 25.4 volts. This QA Inspector observed Mr. Lv Fengbao 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. He Hanbi, stencil 202122 is using flux cored welding procedure WPS-B-T-2233-TC-U4b-F to make segment 11DW weld SEG071E-142 near panel point 105. This QA Inspector observed ZPMC QC has recorded a welding current of 205 amps and 25.4 volts. This QA Inspector observed Mr. He Hanbi appears to be certified to make this weld and the base material appears to have been being preheated by a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

Yard behind OBG bay 19

This QA Inspector observed ZPMC welder Mr. Ge Hao, stencil 201583 is using welding procedure WPS-345-FCAW-1G(1F)-Repair-misdrilled.hole to make OBG segment 10AW weld repair of a misdrilled hole

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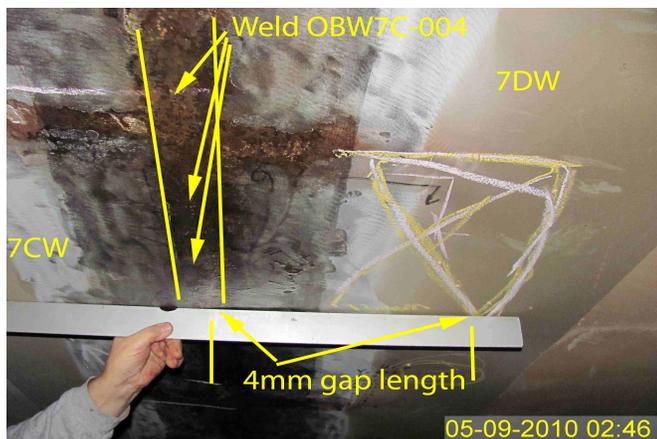
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near longitudinal diaphragm LD004, panel point PP86. This QA Inspector observed ZPMC QC Inspector Mr. Tang Ya Jun has recorded a welding current of 304 amps and 30.3 volts. Mr. Ge Hao appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Bi Xiaofei, stencil 045204 is using shielded metal arc procedure WPS-B-P-2112-FCM-1 to make various repair welds of visual rejections in OBG segment 10AW between panel point 87 and 88. This QA Inspector observed Mr. Bi Xiaofei appears to be certified to make this weld and the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and the base material is being preheated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

Segment Trial Assembly

Caltrans QA Inspector Mr. Mike Hasler performed ultrasonic inspections of the complete joint penetration welds on OBG segment 7 West. Mr. Hasler observed an area of weld OBW7C-004 which joins 7CW to 7DW cross beam side plates appears to have mismatch. The butt weld has a 640 mm length of the weld that appears to have mismatch of approximately 4 mm in the center of the weld and this 4 mm gap extends toward the 7DW plate for a minimum of approximately 500 mm. This mismatch area starts at approximately Y=3350 mm and extends to approximately Y=3750 mm. This QA Inspector took several photographs of the mismatch area and this information was submitted to dayshift Caltrans personnel for follow-up inspections. See the photographs below for additional information.



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
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Reviewed By:	Carreon,Albert	QA Reviewer
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