

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-014854**Date Inspected:** 21-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. Li Yang, Mr. Xu Tao, Mr. Geng Wei

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 13

This QA Inspector observed ZPMC welder Ms. Wang Min, stencil 044771 is using submerged arc welding procedure specification WPS-B-T-2221-2 to make OBG segment 13AE bottom plate groove butt weld BP3032-001-001. This QA Inspector observed Ms. Wang Min appears to be certified to make this weld and measured a welding current of approximately 690 amps and 31.0 volts. ZPMC is using electric heating elements to maintain the temperature of the steel plates that are being welded. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. He Hanbi, stencil 202122 is using flux cored welding procedure WPS-B-T-2221-2 to make segment weld SEG3004L-004 and -005. This QA Inspector measured a welding current of approximately 318 amps and 31.0 volts. This QA Inspector observed the base material appears to have

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been preheated with electric heating elements and Mr. He Hanbi 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. Jiang Yafei, stencil 045276 has been using flux cored welding procedure WPS-B-T-2132 to make OBG weld SEG3004D-004 and -005 at OBG segment 12CW. This QA Inspector observed ZPMC QC has recorded a welding current of 321 amps and 30.6 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Yaobing, stencil 204730 has used flux cored welding procedure WPS-B-T-2132 to make OBG segment weld SEG3004G-006. This QA Inspector observed ZPMC QC Inspector Mr. Tao Wei has recorded a welding current of 309 amps and 31.0 volts. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Segment Assembly

This QA Inspector observed ZPMC welder Mr. Chen Cheng Hua, stencil 220067 has been using flux cored welding procedure WPS-B-T-2231-B-U2-F to make weld OBE9-003. This weld joins OBG segment 9AE and OBG segment 9BE top deck plates. This QA Inspector observed ZPMC QC personnel have recorded a welding current of 310 amps and 29.0 volts. This QA Inspector observed that Mr. Chen Cheng Hua appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

During random Quality Assurance (QA) visual inspection of top deck plate weld OBE9-003 joining OBG segments 9AE and 9BE this Quality Assurance Inspector (QA) discovered ZPMC has temporarily welded two wind screen / roof structure support leg base plates to top deck plates on OBG segments 9AE and 9BE. One tack weld is on segment 9AE deck plate DP500A and one tack weld is on segment 9BE deck plate DP501A. Each of the temporary welds is located approximately 2 meters away from either side of top deck plate weld OBE9-003.

This Caltrans Quality Assurance Inspector (QA) observed ZPMC has temporarily welded two wind screen / roof structure support leg base plates to top deck plates on OBG segments 9AE and 9BE. One tack weld is on segment 9AE deck plate DP500A and one tack weld is on segment 9BE deck plate DP501A. Each of the temporary welds is located approximately 2 meters away from either side of top deck plate weld OBE9-003 which joins OBG segments 9AE and 9BE. This QA Inspector asked ZPMC CWI Mr. Li Yang if ZPMC has approval to make these temporary welds and Mr. Li Yang said he does not know if engineering approval has been submitted for these welds. This QA Inspector informed ZPMC QC CWI Mr. Li Yang and ABF representative Mr. Zou Hu that an incident report is being issued to document these tack welds being made without engineering approval. See the photographs below for additional information.

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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
Reviewed By: Carreon,Albert

Quality Assurance Inspector
QA Reviewer
