

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022737**Date Inspected:** 16-Apr-2011**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 Inspector: Mr. Cui Zheng Hua

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. Wang Li, stencil 044772 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019E-1-080. This QA Inspector observed a welding current of approximately 185 amperes (amps), the base material had been preheated with electric heaters and Mr. Wang Li appeared 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. Yang Junping, stencil 501946 used shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make OBG segment 14E welds DP3167-001-028 and DP3160-001-011. This QA Inspector observed a welding current of approximately 165 amps, the base materials were heated with a torch and Mr. Yang Junping appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair -1 to make weld repairs to OBG segment 14E weld SEG3019N-183. ZPMC QC informed this QA Inspector that weld repair document B-WR-20620 documents this welds had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 180 amps, the base materials were preheated with a torch and Mr. Yang Yunfeng appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair -1 to make weld repairs to OBG segment 14E welds SEG3019N-173. ZPMC QC informed this QA Inspector that weld repair document B-WR-20620 documents this welds had been ultrasonically rejected. This QA Inspector observed a welding current of approximately 165 amps, the base materials were preheated with a torch and Mr. Wang Zhengbin appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Linjiang stencil 051356 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 14E weld SEG3019J-089. This QA Inspector measured a welding current of approximately 250 amps and 25.5 volts. This QA Inspector observed Mr. Wang Linjiang appeared to be certified to make this weld and the base materials had been heated with electrical heaters. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhu Jibo, stencil 055564 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 14E weld SEG3019M-009 and SEG3019P-050. This QA Inspector measured a welding current of approximately 225 amps, 26.0 volts, the base materials were preheated with a torch and Mr. Zhu Jibo appeared to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Yuan Wensong, stencil 055491 used flux cored welding procedure WPS-B-T-2233-ESAB to make OBG segment 14E weld SEG3019E-1-068. This QA Inspector measured a welding current of approximately 230 amps and 26.0 volts. This QA Inspector observed Mr. Yuan Wensong appeared to be certified to make this weld and the base materials had been heated with electrical heaters. Items observed on this date appeared to generally comply with applicable contract documents.

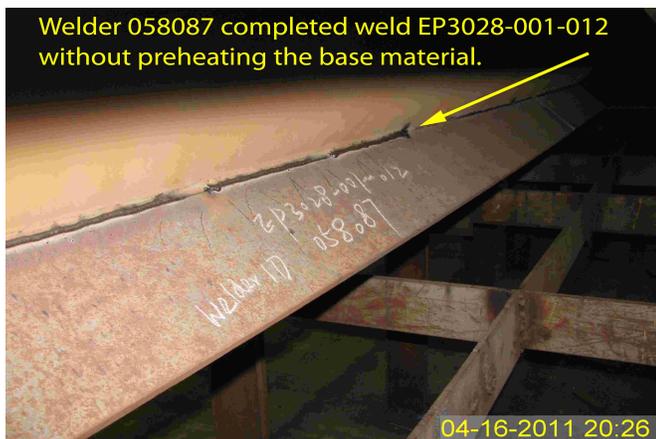
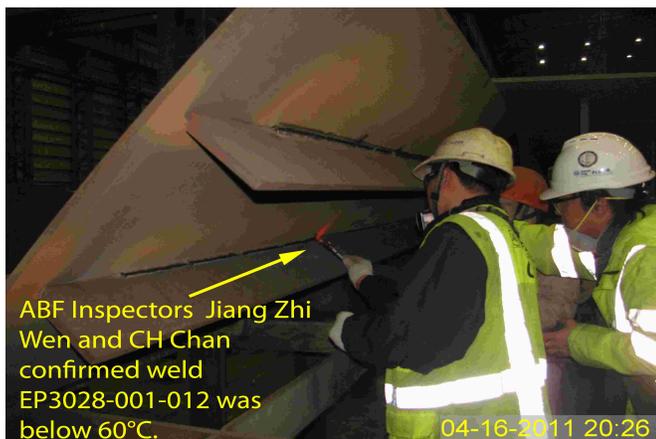
This QA Inspector observed ZPMC welder Mr. Wang Changfa, stencil 058102 used shielded metal arc welding procedure specification WPS-B-P-2214-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019W-024. This QA Inspector observed a welding current of approximately 160 amps, the base material had been preheated with a torch and Mr. Wang Changfa appeared 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. Wang Changfa, stencil 058102 used shielded metal arc welding procedure specification WPS-B-P-2214 to make OBG segment 14E weld EP3028-001-012. This QA Inspector observed a welding current of approximately 175 amps and there was no preheating torch or electrical heater within 20 meters of where this welding was taking place. ABF Inspector Mr. Jiang Zi Wen also observed Mr. Wang Changfa performing this welding. This QA Inspector asked Mr. Jiang Zi Wen if the base materials had

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been preheated prior to welding and Mr. Jiang Zi Wen used a (60°C) temperature indicating crayon and confirmed the base materials had not been preheated to a minimum of sixty degrees Celsius (60°C) prior to welding as required by the WPS. ABF representative Mr. CK Chan also confirmed the lack of base material preheat and he informed this QA Inspector that he will issue a nonconformance report to document the lack of preheat. 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 James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By: Dawson,Paul

Quality Assurance Inspector

Reviewed By: Riley,Ken

QA Reviewer