

**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-016391**Date Inspected:** 22-Aug-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 Inspector: Mr. Liu Hua Jie

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 Segment Trial Assembly**

This QA Inspector observed ZPMC welder Mr. Wang Hongchang, stencil 052763 used flux cored welding procedure WPS-B-T-2233T to make weld OBE10B-005. This butt weld joins the cross beam side plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 225 amps, 26.0 volts, Mr. Hongchang appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Hengjun, stencil 044473 used flux cored welding procedure WPS-B-T-2233T to make weld OBE10B-004. This butt weld joins the cross beam side plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 200 amps, 24.0 volts, Mr. Wang Hengjun appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract

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## WELDING INSPECTION REPORT

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documents.

This QA Inspector observed ZPMC welder Mr. Chang Chuan Gang, stencil 053870 used flux cored welding procedure WPS-B-T-2231T to make weld OBE10B-003. This butt weld joins the bottom plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 280 amps, 28.0 volts, Mr. Chang Chuan Gang appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Lin Bo, stencil 047353 used flux cored welding procedure WPS-B-T-2231T to make weld OBE10B-003. This butt weld joins the bottom plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 300 amps, 29.0 volts, Mr. Lin Bo appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Heishan, stencil 040458 used flux cored welding procedure WPS-B-T-2233T to make weld OBE10B-002. This butt weld joins the bikepath side plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 220 amps, 24.0 volts, Mr. Zhang Heishan appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sui Jianting, stencil 202211 used flux cored welding procedure WPS-B-T-2233T to make weld OBE10B-002. This butt weld joins the bikepath side plates between OBG segments 10AE and 10BE. This QA Inspector measured a welding current of approximately 210 amps, 24.0 volts, Mr. Sui Jianting appeared to be certified to make this weld and the base material had been preheated with electric heating elements. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Jinguo, stencil 049541 used flux cored welding procedure WPS-B-T-3132 to make side plate hold back weld SP137-001 welds 25 through 36. This QA Inspector measured a welding current of approximately 320 amps, 30.8 volts, the base material adjacent to this weld was preheated with a torch and Mr. Wu Jinguo appeared to be certified to make these welds. This weld was located on the counterweight side plate on OBG segment 10AW. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhu Ming Jun, stencil 040609 used flux cored welding procedure WPS-B-T-2231-B-U2-F to make welds SEG059A-040 and SEG061A-003. These weld joints are located on OBG segment 10AW and 10BW side plate to bottom plate near panel point PP088. This QA Inspector observed ZPMC QC had recorded a welding current of 320 amps, 31.2 volts and Mr. Zhu Ming Jun 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. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure specification WPS-B-P-2214-B-U2-FCM-1 to complete weld OBW10B-004. This weld was located on the cross beam side edge plate between OBG segments 10AW and 10BW. This QA Inspector observed a welding

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# WELDING INSPECTION REPORT

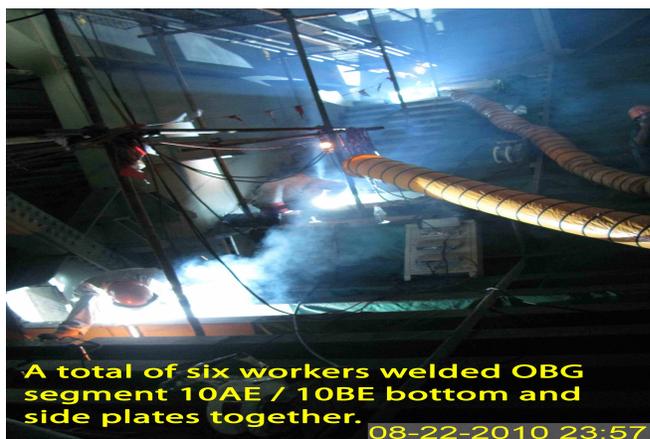
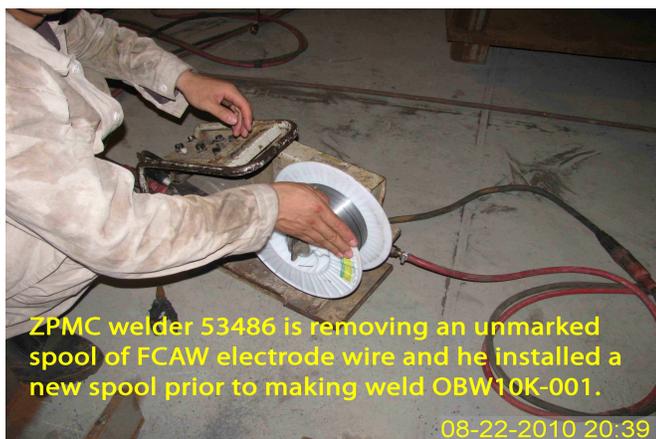
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current of approximately 150 amps, Mr. Zhang Qiu Jun appeared to be certified to make this weld and the base materials appeared to have been preheated with electric heaters. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Jun stencil 053486 used flux cored welding procedure WPS-B-T-2212-FCM-1 to make weld OBW10K-001. This weld joins OBG segment 10AW counterweight mounting plate to the edge plate. This QA Inspector observed ZPMC QC adjusting the welding machine to have a welding current of approximately 300 amps and 30.0 volts as Mr. Wu Jun welded on a scrap piece of plate. This QA Inspector observed the spool of flux cored welding electrode on the welding machine did not appear to have a date to indicate when the welding electrode protective packaging was first opened. This QA Inspector asked ZPMC QC Inspector Mr. Shi Lei if there was a date written on the spool of welding electrode and Mr. Shi Lei said Mr. Wu Jun will obtain a new spool of welding electrode before he starts to weld on OBW10K-001. Mr. Wu Jun appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.



### 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

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