

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-017005**Date Inspected:** 07-Sep-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:**

ZPMC CWI Inspectors: ZPMC CWI Mr. Lu Li Qing, ABF CWI Mr. Wang Heng

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

ZPMC presented QA personnel with "Notification of Witness Inspection" document number 6609 that stated ZPMC was requesting Caltrans to perform visual and magnetic particle (MT) inspections of OBG segment 9AW through 9EW "Drip Plate Welds". This QA Inspector performed random visual and magnetic particle (MT) inspections of welds OBW9E-040~043, 054~057; OBW9D-040~043, 054~057, -065, -066. Items observed by this QA Inspector appeared to comply with AWS D1.5 MT requirements. For additional information on these inspections see this QA Inspector's TL6028 Magnetic Particle Test Report.

This QA Inspector observed ZPMC welder Mr. Cheng Chong Lang, stencil 251194 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-FCM-Repair to make base metal weld repairs on OBG segment 10AW top deck stiffener plates. ZPMC CWI Mr. Lu Li Qing showed this QA Inspector weld repair report B-WR14800 that addresses this weld repair. This QA Inspector observed Mr. Cheng Chong Lang appeared to be certified to make these welds and ZPMC and CWI Mr. Lu Li Qing has recorded a welding current of 156 amps.

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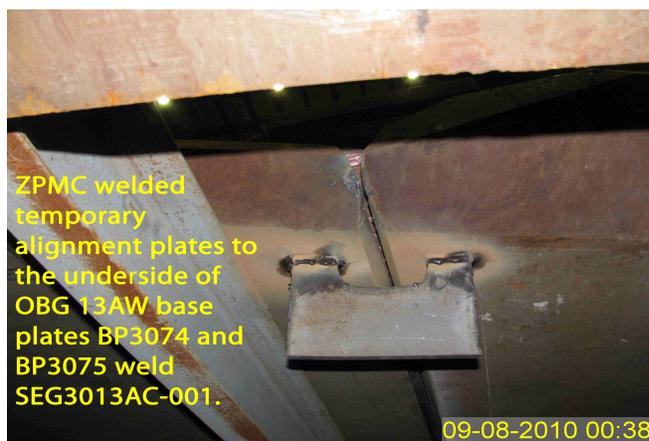
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Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhang Qiu Jun stencil 057333 used shielded metal arc welding procedure WPS-345-SMAW-3G(3F)-Repair to make weld repairs OBW10-001. This weld joins the edge plates between OBG segment 10AW and 10BW. ZPMC CWI Mr. Lu Li Qing showed this QA Inspector weld repair report B-WR14907 that indicates this weld had been ultrasonically rejected. This QA Inspector observed Mr. Zhang Qiu Jun appeared to be certified to make these welds and ZPMC and CWI Mr. Lu Li Qing has recorded a welding current of 155 amps. Items observed on this date appeared to generally comply with applicable contract documents.

Bay 14

This QA Inspector observed ZPMC welder Mr. Tian Zhaoquan, stencil 045246 used shielded metal arc welding process to make tack welds on OBG segment 13AW baseplate butt weld SEG3013AC-001 and Mr. Tian Zhaoquan installed temporary alignment plate welds on the bottom side of this weld joint which joins bottom plates BP3074 and BP3075. This QA Inspector measured a welding current of approximately 165 amps, the base material was preheated with a torch and electrical heating element prior to welding. This QA Inspector observed Mr. Tian Zhaoquan appeared to be certified to make this weld and the welding electrodes were stored in a heated portable electrode storage container. Items observed on this date do not fully appear to comply with applicable contract documents. This QA Inspector observed the 100 mm thick base material appeared to have been preheated to approximately 60 degrees Celsius instead of 110 degrees Celsius. Note: Welding procedures being used for the 13AE baseplate in Bay 10 requires the 100 mm thick base material to have a minimum preheat of 110 degree Celsius. This QA Inspector observed ABF Certified Welding Inspector Mr. Wang Heng was monitoring this welding and this QA Inspector asked Mr. Wang Heng which welding procedure specification (WPS) was being used. After Mr. Wang Heng looked at the various welding procedure specifications that are taped to the wall in bay 14, Mr. Wang Heng informed this QA Inspector that he is not sure which WPS is being used and that he will not be able to obtain the welding procedure specification until dayshift ZPMC personnel arrive. See the photographs below for additional information.



Summary of Conversations:

See Above.

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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
