**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Siegenthaler, Peter
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-017013
**Date Inspected:** 17-Sep-2010

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

**OSM Arrival Time:** 1900
**OSM Departure Time:** 700
**Location:** Shanghai, China

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| **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. Lv Li Qing

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. Tian Xi Dong, stencil 040334 used shielded metal arc process to make “T” stiffener hold back tack welds on OBG segment 10CE and 11AE bottom plates. This QA Inspector observed the welding electrodes were being stored in a portable rod oven which is warm to the touch and it was connected to an electric power cable. This QA Inspector observed that the base materials were preheated with a torch prior to welding and Mr. Tian Xi Dong 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 Xiaomin, stencil 046709 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-Repair-1 to complete repairs of weld CA073-006 as directed on weld repair document B-WR15066. This weld repair document was issued to perform repairs of ultrasonic rejections in the corner hold back weld between OBG segment 10CW edge plate and deck plate. This QA Inspector observed ZPMC QC Inspector Mr. Wang Zhu has recorded a welding current of 148 amps, Mr. Wang

Xiaomin appeared to be certified to make this weld and ZPMC QC is monitoring this welding. 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-2132 to make T stiffener plate hold back welds BP050-001-037 through 048 in OBG segment 10CW and BP051-01 welds 31 through 42 in OBG segment 11AW. This QA Inspector observed ZPMC QC Mr. Wang Zhu has recorded a welding current of 308 amps, 31.7 volts. This QA Inspector observed the base materials appear to have been preheated with a torch prior to welding and Mr. Wu Jun appears to be certified to make these welds. Items observed on this date appear to comply with applicable contract documents.

Paint Shop #2.

ZPMC had informed day shift QA personnel that at approximately 1900 hours ZPMC will have five crash barriers and 14 crash barrier cover plates prepared for application of the final paint mist coat and that at around 21:00 hours application of the final coating should commence. This QA Inspector was informed at around 22:10 hours ABF Inspector Mr. Wei informed this QA Inspector that final painting will be starting, and the final coating DFT (dry film thickness) inspections should be ready tomorrow morning at around 02:00.

At around 0400 ABF Inspector Mr. Wei informed this QA Inspector that various final paint inspections are ready for DFT measurements. When this QA Inspector arrived in paint shop #2, Mr. Wei touched the top painted surface of one of the crash barrier cover plates and partially dried paint adhered to his fingertips. This indicates that the coating is not fully cured. This QA Inspector observed that the coating on the crash barriers was also not fully cured. ABF coating inspector Mr. Wei and Mr. Sun both indicated that these items will be allowed to cure prior to requesting another coating inspection. This QA Inspector observed Mr. Wei performing DFT measurements on request 4371 item #1 CB11 accessories 3 each and item #4 for the final DFT inspections. This QA Inspector observed CB11 accessories DFT readings appeared to comply with project specifications. Item # 2, crash barriers and item #3 crash barrier cover plates were both rejected by ABF due to uncured coatings. A QA lot number was written on this notification

Mr. Sun presented this QA Inspector with request T1203 and T1204 “Cross Beam #11 Channel”, 5 each. Request T2103 was a notification of final finish coat application and request T2104 was for final DFT inspection. Mr. Sun indicated that request T1204 had been delayed due to uncured coatings.


# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

**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 |