

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-016786**Date Inspected:** 10-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:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

ABF Representative Kelvin Cheung notified this QA Inspector that weld joint SEG3007AC-002, side B located on PCMK OBG segment 13AE, bottom plate was finished and ABF MT (magnetic particle testing) technicians would perform 100% MT on the weld before rotating the plate to bring side A facing upward. This QA Inspector witnessed the ABF technicians perform MT of the weld joint, then this QA Inspector performed random VT (visual testing) and MT on the weld before the plate was rotated to side A facing upward. ABF MT technicians and this QA Inspector concurred that no apparent indications were observed. See photo below of OBG 13AE bottom plate being lifted for rotation.

SAW welding of weld joint SEG3007AC-002, side A located on PCMK OBG segment 13AE, bottom plate.

Tandem welders were identified as 062406, 058100. QC was identified as ABF CWI Wang Heng QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhong Guo Hui (QCA1), who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-2221-B-U3c-S-2. The weld was being kept at or above the minimum preheat and interpass temperature with electric heaters placed above and below the plates at the weld.

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# WELDING INSPECTION REPORT

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SMAW welding of weld joint NSD1-TL5-3B-F-7 located on PCMK north tower, lift 5, internal connection plate to skin D. Alternating welders were identified as 037743, 067520. QC was identified as ZPMC CWI Liu Yang (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yu Zhi Lai (QCA2), who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3213-TC-U4c.

## Heavy Dock

This QA Inspector randomly observed the following work being performed on the Heavy Dock:

No apparent welding related work was being performed on the Heavy Dock. All 4 towers' lift 3 were connected and positioned vertically on a base pedestal at end of the Heavy Dock. All 4 towers' lift 2 were positioned horizontally on the deck of the ship at the end of the Heavy Dock. The ZPMC 4000 ton floating crane was moored outboard of the ship and sitting idle. East and south towers, lift 4 were positioned on top of east and north towers, lift 3, respectively. CB11 was positioned on the deck of the Heavy Dock, near the end where the ship was moored. The ZPMC 2200 ton floating crane was also moored to the Heavy Dock and sitting idle.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

As noted 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 Micheal Ng, 159-2184-5703, who represents the Office of Structural Materials for your project.

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**Inspected By:** Goulet, George

Quality Assurance Inspector

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**Reviewed By:** Dawson, Paul

QA Reviewer