

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008499**Date Inspected:** 11-Aug-2009**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:** Wan Wen Zhong**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 and Tower Components**Summary of Items Observed:**

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

**OBG Trial Assembly Area**

This QA Inspector, George Goulet, randomly observed the following in the corner assemblies of segments 2AW/2BW in response to Bolting Inspection Notification Sheet No. 00067:

**Section 2AW/2BW, deck panel U-rib connections:**

ZPMC workers performed final bolt tightening verification at the direction of ZPMC QC Inspector Hu Mei Gang (QC1) using ZPMC calibrated wrench. No less than 10% of the ASTM A325 bolt sets at each connection were torque tested, with a minimum of one bolt set tested at each connection. QC1 provided this QA Inspector, George Goulet, with the following information regarding the bolt sets installed at this location. This QA Inspector, George Goulet, observed ZPMC's Bolt Test Log for SFOBB (RoCap list), listing the RoCap Set numbers, bolt set size, and the N.M test result for torque tightening purposes. The information presented by QC1 and listed below appeared to this QA Inspector, George Goulet, to match the RoCap list.

RC Set No. DHGM220021 – M22-2.5x65 – test result 543N.M

The torque of the above noted bolt sets was verified by torque testing with the a calibrated wrench with the wrench

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setting displayed as 545N.M. This QA Inspector, George Goulet, concurred with QC1 for the issuance of green tag numbers.

This QA Inspector, George Goulet, randomly observed the following work in progress in the trial assembly area:

2AW, panel point 16, east side – ZPMC QC workers performing MT at the DP diaphragm to upper floor beam weld.

1BW/2AW joint – match drilling north longitudinal bulkhead through splice plates into the 2BW side.

3AW, between panel points 19 and 20 – Removing bolts sets from and disassembling traveler rail assembly.

3AW/3BW joint – installing heavy channel reinforced U-rib splice plate at U-rib #7.

CB3 – sandblasting inside in the deck plate area.

4BE, at the extension area into CB 3- checking coating thickness with a guage and adding coating by air spraying.

Bay 10

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

SAW welding of weld joint SSSL3-1B/K-83B located on PCMK south tower shaft, skins A to B at midpoint. Welder was identified as 0503060. ZPMC QC was identified as CWI Wan Wen Zhong (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Jiang Xiao Bo, who was not a CWI. The welding variables recorded by QC2 and QC2's assistant appeared to comply with WPS-B-T-2211-B-L2c-S-2.

SAW welding of weld joint SSSL3-1B/K-82B located on PCMK south tower shaft, skins A to B at midpoint. Welder was identified as 050295. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Jiang Xiao Bo, who was not a CWI. The welding variables recorded by QC2 and QC2's assistant appeared to comply with WPS-B-T-2211-B-L2c-S-2.

SAW welding of weld joint SSSL3-1B/K-82B located on PCMK south tower shaft, skins A to B at the bottom 25%. Welder was identified as 207745. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Jiang Xiao Bo, who was not a CWI. The welding variables recorded by QC2 and QC2's assistant appeared to comply with WPS-B-T-2211-B-L2c-S-2.

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

### **Summary of Conversations:**

As noted above, and this QA Inspector, George Goulet, was informed by QC1 that the above noted bolt set numbers were recorded by ZPMC during installation.

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This QA Inspector, George Goulet, asked each QC monitoring the welding if all the welding variables observed by QC appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. Each QC showed this QA Inspector, George Goulet, that QC was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all QC observed did appear to comply.

### 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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Goulet,George	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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