

**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-004831**Date Inspected:** 01-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Lvliqing and Huang Wen Pang	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
		<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG and SAS Tower Fabrication	

**Summary of Items Observed:**

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

**Bay 7: OBG - Floor Beam Sub Assembly**

This QA performed 10% Magnetic Particle Testing (MT) of fillet welds on stiffener and flange to web plate of the following floor beams for green tagging;

- a) FB020-003-086, 087, 120 etc. (side B) – deemed acceptable
- b) FB028-003-086, 087, 120 etc. (side B) - deemed acceptable
- c) FB024-005-082, 083, 094 etc. (side B) - deemed acceptable

This QA also observed ID #044815 FCAW(1G) CJP welding fill pass on flange to web plate corner joint FB019-004-127 using a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic and following WPS-B-T-2231-Tc-U4b-F. FCAW(2G) CJP welding fill pass on stiffener end (200mm long) to web plate of FB019-004-076 by ZPMC welder Liu Kaige ID #044830. The QA inspector randomly observed ZPMC CWI Huang Weng Pang monitoring preheat and weld parameters.

The QA Inspector randomly observed ZPMC welder Duan Xin Zhi ID Number 050502 utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the fill pass on plate splice

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## WELDING INSPECTION REPORT

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butt joint of longitudinal diaphragm sub-assembly LD034-001-010. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

### Bay 4: Tower Diaphragm

The QA Inspector randomly observed ZPMC welder Xu Pei Pei ID Number 050323, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the CJP fill pass on 75mm thick plate splice butt joint of tower diaphragm NSD1-SA356-2B and NSD1-SA369A/B-2B. QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

### Bay 3: OBG side/bottom/edge panel

This QA Inspector also randomly observed ZPMC welder operator ID Number 054459 and ID #062447, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with gantry(#2) mounted welding apparatus and ZPMC WPS WPS-B-T-2132-3, to weld open rib stiffener to side panel SP456-001-weld joints 003/004, and 007/008 respectively. FCAW(2F) fillet welding also continues on 3-open rib stiffener to deck panel DP648-001-003/004 using WPS-B-T-4132 at gantry #1. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

Tack/fit-up of various 2 & 3 open rib stiffeners to edge and deck panels using THJ506 electrode on EP064-001-003~006, DP660-001-001~006 and DP641-001-001~006 this QA observed.

### Bay 1: OBG Sub assembly

Observed ZPMC/NDE perform Magnetic Particle Testing(MT) on tack welds of 3-U rib stiffener to deck panel DP502-001-001~006.

### Summary of Conversations:

No significant conversation occurred today.

### 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 Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lizardo, Joselito	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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