

**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-003950**Date Inspected:** 30-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Huang Wen Pang and Wu Ming Cai			<b>CWI Present:</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<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 2: 114M Tower Mock-ups, Plate Cutting, Rolling

This QA Inspector observed machining/beveling of 60mm thick plate marked P1232 and P1144 for tower diaphragm plate and 8-60mm thick plates marked P1142, and P1143 for tower double diaphragm stiffener plate was seen continuing. Cutting of 70mm thick plate marked P360 was seen complete while rolling machine was seen idle.

Bay 3: OBG side/bottom/edge panel

This QA observed cutting of W21x57 to make WT rib stiffeners for various bottom plates BP65, BP173 and BP38 was seen in progress.

The QA Inspector randomly observed ZPMC welder Li Zhao Qian ID Number 048810, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-B-U2-F, to weld fill pass on WT (W21x57) web splice butt joint BP174-001-047/048. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

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This QA Inspector also randomly observed ZPMC welder operator Wei Dashuai ID Number 051246, Han Hong Wei ID #200149 and Xin Meng ID #053742 utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with gantry(#1) mounted welding apparatus and ZPMC WPS WPS-B-T-2132-3, to weld 6-wt (W21x57) rib stiffener to side plate SP341-001-weld joints 013/014, 017/018 and 021/022. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

Tack/fit-up of 6-wt(W18x46) rib stiffener to side plate SP576-001-013~020 and SP722-001-013~024 and 6-wt(W21x57) rib stiffener to SP368-001-019~024 using TL-508 electrode was noted.

### Bay 4: Tower Diaphragm

The QA Inspector randomly observed ZPMC welder ID Number 053748, ID #046830 and ID #049804 utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the fill pass on 75mm thick tower diaphragm plate splice butt joint ESD1-SA424A/B-9A/10A, ESD1-SA381A/B-1A, and SSD1-SA95-1B/2B respectively. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters.

This QA observed four ZPMC welders ID #068250, ID #066398, ID #066179 and ID #066326 SMAW (2G) PJP welding fill pass on 60mm stiffener plate to tower double diaphragm (bottom) NSD1-SA333B/B weld joints 1, 2, 13 and 14. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters. Flame bevel cutting on top tower double diaphragm plate SSD1-23M was also noted.

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

This QA Inspector randomly observed ZPMC welder Liu Kaige ID #044830 utilizing the FCAW Process in the 2G (Hor. Groove) Position with WPS-B-T-2232-Tc-U4b-F and a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic to weld fill pass on web plate to flange tee joint on floor beam FB009-015-043. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring preheat and weld parameters.

The QA Inspector randomly observed ZPMC welder Duan Xin Zhi ID Number 050502 and Huang Xin Lan ID #044780 utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the cover pass on 12mm thick plate splice butt joint of floor beam sub-assembly FB020-003-079 and FB023-003-079 respectively. QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

FCAW(2F) fillet welding on flange to web plate FB009-010-009, FB003-080-002 and flange to web plate on various welded spacer beam (W51/2" x 251/2") FB006-078, FB006-077 utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H following WPS-B-T-2132-3 and WPS-B-T-2232-3 this QA observed. ZPMC welder Chen Chuanzong ID #044824, and Qi Huan Huan ID #067184 were seen performing the task respectively.

### Bay 8: Tower Diaphragm

This QA observed ZPMC welders ID #068924, ID #037997, ID #066456 and 066457 SMAW(2G) PJP welding

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root pass on 40mm web plate to (bottom) tower double diaphragm WSD1-SA32B/B weld joints 1 and 2. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode following WPS-B-T-3312-Tc-P5. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

Tack/fit-up of 40mm web plate to (top) tower double diaphragm NSD1-SA311B/B weld joints 5 and 6 using Excalibur E9018M H4R, 4.8mm diameter electrode was also observed.

### 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,Josecito	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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