

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-002313**Date Inspected:** 15-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Zhao Chen Sun and Zhang Bao Le			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 SAS Tower		

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 these Bays mentioned below;

Bay 4 Tower Diaphragm

This QA Inspector randomly observed ZPMC welder Mr. Wu Zhi Bin ID #049804 welding fill passes on weld joint # WSD1-SA318-A/B-3B. Mr. Wu was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.0mm diameter electrode, filler metal brand LA-85, class ENIS, machine. QA Inspector Lizardo observed the ZPMC QC CWI Inspector Mr. Zhao Chen Sun verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Zhao Chen Sun to be: preheat temperature of 180°C and welding parameters amps of 640, volts of 31.6, and a travel speed of 480mm/min. Welding parameters observed by QA Inspector Lizardo appear to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

This QA Inspector randomly observed ZPMC personnel performing heat straightening side panel #6AE SP307(A) ZPMC report #HSR1 (B)-848 and side panel #6AW SP121(A) ZPMC report #HSR1 (B)-892. Heat Straightening is performed by flame straightening by natural gas using a hand torch and monitored by ZPMC QC Zhang Qiang

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not to go beyond 600 degree C. This heat straightening noted to be at first stage.

ZPMC NDT (MT):

This QA Inspector observed ZPMC magnetic particle (MT) technicians Mr. Zhou Dongyun and Mr. Wang Wei performing 10% MT at the fillet welds of the following side panels;

- 1) SP566-001-001 to 012
- 2) SP565-001-059 to 070
- 3) SP477-001-065 to 078
- 4) SP474-001-036 to 049

After ZPMC technicians completed their test, this QA Inspector also performed 10% MT on the above mentioned side panels and found deemed acceptable to project requirements.

Bay 3-OBG Bottom panel:

QA Inspector Lizardo randomly observed ZPMC qualified welder Wang Zhonghua, tack welding T stiffeners plate to bottom panel BP115-001, using a shielded metal arc welding (SMAW) process and utilizing THJ506Fe with 4.0mm diameter electrode.

At two separate locations, setting up of welding machine at gantry #1 and preheating of bottom panel BP61-001 was in progress at one location and Flux Cored Arc Welding of complete penetration joint (CPJ) on WT flange splice of bottom panel BP032-001-006 was underway at another location. This CPJ is being welded by qualified welder Li Shugiang and was using a WPS-B-T-2233-B-U2-F. This QA Inspector noted ZPMC QC Inspector at the vicinity of the welder monitoring the parameters.

Bay # 2: 77 and 114M Tower Mock-ups, Plate Cutting, Rolling

This QA Inspector observed Tower Mock-up was idle so with the rolling machine. On separate location, this QA has observed thermal cutting of 60mm thick plates with various sizes and shapes. Item marks on plate's pieces were not visible. Also on horizontal milling machine, one 75mm thick plate without visible marking was seen in-progress on beveling and one 75mm thick plate without visible marking being set up.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
Reviewed By:	Cochran, Jim	QA Reviewer
