

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-003693**Date Inspected:** 24-Aug-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

CWI Name:	Liu Hua Jie and Hu Wei Qing			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
Bridge No:	34-0006			Delayed / Cancelled:	Yes	No	N/A
				Component:	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 6-60mm thick plates marked P564, P244 and P243 for tower double diaphragm stiffener plate seen in progress and 3-30mm thick plates marked FB19B, FB11C being set at the table for transition machining on both sides of the plate. No cutting of plate material for Caltrans job and rolling machine was noted idle.

Bay 3: OBG side/bottom/edge panel

The QA Inspector randomly observed ZPMC welder operator Li Zhaoquan ID Number 048810, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with gantry(#1) mounted welding apparatus and ZPMC WPS WPS-B-T-4132, to weld 3-open-ribs stiffener to deck plate DP515-001-weld joints 001/002 and 005/006 respectively. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 296 amps, 30.6 volts; 302amps, 30.2 volts. Travel speed for all welds was randomly observed at 400 mm per minute. The weld parameters appeared to comply with contract requirements.

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The QA Inspector randomly observed ZPMC welder He Yu Mei ID Number 048625, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U2-F, to weld fill pass on WT (W21x57) flange splice butt joint SP152-001-041/042. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

Bay 4: Tower Diaphragm

This QA observed ZPMC/NDE perform 100% MT on fillet weld connection of tower diaphragm plate to diaphragm flange ESD1-SA317-1 and SSD1-SA333A/B-9 was seen in progress.

This QA observed four ZPMC welders ID #066268, ID #066418, ID #066459, and ID #037779 SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) NSD1-SA322 B/B weld joints 5 and 6. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Zhashi monitoring weld parameters.

FCAW(2F)/tack was also observed on fillet weld connection of tower diaphragm plate to diaphragm flange WSD1-SA287-1 using 1.4mm diameter, K71TSR wire electrode. Maximum gap noted during fit-up was 7.0mm.

Bay 7: OBG - Floor Beam Sub Assembly

This QA randomly observed ZPMC welder Hong Shuili ID Number 044815 and Liu Kaige ID #044830, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 1G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2231-Tc-U4b-F to weld CJP fill pass on flange to web plate tee joint of floor beam FB030-001- 127 and FB032-001- 127 respectively. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring preheat and weld parameters.

Tack/fit-up of 12mm thick floor beam plate splice butt joint using 4.0mm diameter, TL-508 electrode on FB010-010-023 and FB009-010-021. ZPMC CWI Hu Wei Qing was also observed monitoring preheat and weld parameters.

Bay 8: Tower Diaphragm

This QA observed two ZPMC welders ID #068924 and ID #066456 SMAW(2G) PJP welding cover pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA334 weld joints 9 and 10. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Liu Hua Jie monitoring weld parameters.

This QA Inspector randomly observed ZPMC welder Jiang Yong Sheng ID number 045240 utilizing the FCAW Process in the 3G (Vertical Groove) Position with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic with ZPMC WPS WPS-B-T-2233-B-U3-F, to weld fill pass on groove (bent heavy plate) splice butt joint on Tower Diaphragm Flange Sub-Assembly NSD1-SA311 A/B-7A. The QA Inspector randomly observed ZPMC CWI Liu Hua Jie monitoring weld parameters.

Summary of Conversations:

No significant conversation occurred today.

Comments

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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.

Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
