

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-003332**Date Inspected:** 07-Jul-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:** Hu Wei Qing and Lvliqing**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 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

The QA Inspector randomly observed ZPMC welder Liu Kai Ge ID Number 044830, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 3G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2233-Tc-U4-F, to weld fill pass on skewed connection plate (of 300mm x 300mm diagonal brace) to floor beam bottom flange Sub-Assembly SSD16A-PP032-131. The QA Inspector randomly observed ZPMC QC Yang Ding monitoring weld parameters with the supervision of ZPMC CWI Hu Wei Qing.

QA Inspector J. Lizardo randomly observed ZPMC qualified welder Zhang Qing Quan ID #066418 groove welding fill pass on (flange to web plate) tee joint. Mr. Chen was observed welding in the 2G (horizontal) position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic at floor beam FB027-002-146. QA inspector Lizardo observed the ZPMC QC CWI Inspector Hu Wei Qing verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS).

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

FCAW fillet welding (2F) was observed on stiffener to web plate on floor beam sub-assembly FB027-002 weld joints 099 and 096. ZPMC welders working on these were identified as Liu Long Xian ID# 044786 and Liu Kai Ge ID #044830. ZPMC CWI Hu Wei Qing was noted monitoring the parameters. SMAW tack welding was also noted on multiple stiffeners to web plate of floor beam FB023-001 using 4.0mm diameter, THJ506Fe electrode.

SMAW(2F/3F) fillet welding on 8.0mm thick end cap to 300mm x 300mm hollow steel diagonal brace for various floor beams sub-assembly FB006-034-003, FB006-035-003, FB006-035-004 and FB006-036-001. This QA observed ZPMC welder Yang Gencheng ID #066418 doing the task using TL-508 electrode.

Bay 8: 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-2221-B-L2c-S-1, to weld the fill pass on plate splice butt joint of floor beam FB015-015-026. The QA Inspector randomly observed ZPMC CWI Lvliqing, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 505 amps, 30.4 volts with travel speed of 420mm/minute. Weld parameters appeared to comply with contract requirements.

This QA Inspector randomly observed two ZPMC welder Jiang Yong Sheng ID number 045240 and Chen Chao Nian ID #048688 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 SSD1-SA334 weld joint 12A and 5A respectively. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters.

FCAW fillet welding (1F) was observed on flange to web plate on longitudinal shear plate LD019-003-011 and LD002-004-011. ZPMC welders working on these were identified as Wang Chaili ID# 045203 and Liu Yu Jun ID #202654. ZPMC CWI Hu Wei Qing was noted monitoring the parameters.

Summary of Conversations:

No significant conversation occurred.

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 Ady Velasco, (858) 344-8746, who represents the Office of Structural Materials for your project.

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