

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-003664**Date Inspected:** 19-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:** Ye Yong Jun 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 4: Tower Diaphragm

This QA observed ZPMC/NDE perform MT and found transverse linear indication on the following OBG bottom plates;

- a) BP312A- 1 transverse linear indication noted.
- b) BP310A- 1 transverse linear indication noted.
- c) BP309A- 2 transverse linear indication noted.

This QA observed two ZPMC welders ID #068918, ID #066416, and ID #066418 SMAW(2G) PJP welding fill pass on 60mm stiffener plate to tower double diaphragm(bottom) ESD1-SA318 B/B weld joints 9, 11, 13 and 16. This QA also observed welder ID #066398, ID #066459, ID #037998, SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA333 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.

This QA observed two ZPMC welders, ID #066751, and ID #054460 utilizing the FCAW Process in the 2F

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(Horizontal) Position with a 1.4mm diameter electrode, filler metal brand K-71TSR, semi automatic with ZPMC WPS WPS-B-T-4132 to weld fillet fill pass on fillet weld connection between tower diaphragm plate to diaphragm flange NSD1-SA333A/B-9. The QA Inspector randomly observed ZPMC CWI Ye Yong Jun monitoring weld parameters.

Heat straightening was also observed on 77mm thick plate marked P671(E) due to mill induced distortion. Natural gas was used with thermal heat input of less than 600 degree C following procedure HSR1(T) – 3231.

Bay 7: OBG - Floor Beam Sub Assembly

This QA observed ZPMC/NDE perform MT on floor beam FB020-001. This QA also performed MT on this floor beam and found deemed acceptable.

Bay 8: Tower Diaphragm

This QA observed ZPMC welder ID #066443, and ID #066456 SMAW(2G) PJP welding fill pass on 40mm web plate to tower double diaphragm(bottom) SSD1-SA169 B/B weld joints 11 and 12. ZPMC welders were noted utilizing Excalibur E9018M H4R, 4.8mm diameter electrode. The QA Inspector randomly observed ZPMC CWI Lvliqing monitoring weld parameters. SMAW (4G) tack welding of 40mm web plate to (top) tower double diaphragm SSD1-SA334B/B weld joints 6 and 11 using the same electrode.

This QA observed tower double diaphragm ESD1-SA371B/B top and bottom web and stiffener plates welding to diaphragm plates seen complete while double diaphragm ESD1-SA301 was noted idle.

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.

Inspected By: Lizardo,Josecito

Quality Assurance Inspector

Reviewed By: Cuellar,Robert

QA Reviewer