

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-003375**Date Inspected:** 01-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:	Zhao Chen Sun and Huang Wen Peng			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 Inspector randomly observed ZPMC welder Fei Chong Xiang ID #066239, Li Shu Qiang ID #053605 and Han Si Gi ID #202842 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 passes on groove (bent heavy plate) splice butt joint on Tower Diaphragm Flange Sub-Assembly NSD1-SA333 weld joints 6A and 11A AND WSD1-SA318 A/B-7A respectively. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring preheat and weld parameters.

This QA Inspector randomly observed four ZPMC welders Weng Zhonghua ID #053753, Dong Youjin ID #066416, Li Shoufo ID #066674 and Liao Yanfei ID #066398 utilizing the SMAW Process in the 2G (Horizontal Groove) Position with a 4.8mm diameter electrode, filler metal brand Excalibur E9018M H4R with ZPMC WPS WPS-B-T-3313-Tc-P5, to weld PJP fill passes on groove 40mm web plate to tower double diaphragm plate SSD1-SA27 B/B weld joints 7, 8, 11 and 12. The QA Inspector randomly observed ZPMC CWI Yu Dong Ping monitoring preheat and weld parameters. Fit-up/tack welding was also observed on 40mm to 60mm tower double diaphragm web plate tee joint of ESD1-SA234 B/B using the same electrode mentioned above.

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This QA observed preheating to >180 degree C using ceramic thermal blanket on tack welded fillet weld connection of tower diaphragm flange to diaphragm plate NSD1-SA276-9 prior welding.

Bay 7: OBG - Floor Beam Sub Assembly

FCAW fillet welding (2F) was observed on web plate to web plate of longitudinal shear plate LD001-010-011 and FCAW(2F) fillet weld repair due to noted porosity on fillet weld of flange to web plate of floor beam FB028-001-093. ZPMC welders working on these were identified as ID# 066695 and Zhang Qingquang respectively. FCAW(1G) CJP welding fill pass on flange to web plate corner joint of floor beam FB023-001-127 and FB024-001-127 by two ZPMC welders Chen Chuanzong ID #044824 and Hong Shuili ID #044815 this QA observed. Also noted was FCAW(2G) CJP welding on stiffener end(200mm long) to web plate of floor beam FB033-001-058/064 by welder Wang Hong Lei ID #066687.

This QA observed SMAW(3G) CJP welding fill pass on continuity plate to beam bottom flange floor beam FB003-055 weld joints 034 and 046 using 4.0mm diameter, TL-508 electrode by ZPMC welder Wu Hai Jun ID #201087.

The QA Inspector randomly observed ZPMC welder Duan Xiu Zhi ID Number 050502, utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the fill pass on plate splice butt joint floor beam FB003-076-001. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters.

Pre-assembly of skewed connection plate to floor beam bottom flange SSD15A-PP041-131/132, SSD15B-PP041-131/132 and SSD9-PP042-131/132 & SSD9B-PP041-131/132 was observed.

Bay 8: Tower Diaphragm

This QA observed two notches with dimensions 50x25x9mm(LxWxD) and 55x30x8mm were noted on 40mm thick web plate for tower double diaphragm ESD1-SA32 B/B. Another 40mm web plate being installed on this double diaphragm plate also noted with bad cut profile on three access holes. This QA informed ABF/QA Inspector CK Chan regarding these plate defects and told this QA that ZPMC intends to make a request from Caltrans to fix the two notches and then grind smoothly the bad cut on the three access holes. See photo below.

This QA Inspector randomly observed ZPMC welder Jiang Yong Sheng ID number 045240, Li Xing ID #066675 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 WSD1-SA277 A/B weld joint 3B, SSD1-SA311 A/B-weld joints 11B and 5A respectively. The QA Inspector randomly observed ZPMC CWI Zhashi monitoring weld parameters.

This QA observed two ZPMC welders Yang Tianbang, ID #066439 and Liu Xiaolin ID #067079 utilizing the FCAW Process in the 2F (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 root pass on fillet weld connection between tower diaphragm plates to diaphragm flange ESD1-SA348-1. The QA Inspector randomly observed ZPMC CWI Zhashi monitoring weld parameters.

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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, Joselito

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer
