

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-003961**Date Inspected:** 02-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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:** See below**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:** Tower & OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Bay 4:

The QA Inspector randomly observed 2 helpers utilizing angle grinders to blend the root pass in preparation on Magnetic Particle Testing (MT) examination by ZPMC QC, on the 2G welds attaching the webs to 43M Top Tower Diaphragm NSD1-SA276.

The QA Inspector randomly observed ZPMC welders Yang Gencheng ID Number 066418, Fu Yanjie ID Number 066268, Meng Tao ID Number 068918 and Du Henghua ID Number 037779 utilizing the Flux Cored Arc welding (FCAW) Process in the 2G (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-3312-TC-P5, to weld the web to 33M(W) Bottom Tower Diaphragm WSD1-SA317 welds, Weld Joint (WJ) Numbers WSD1-SA317-12, 13, 14 and 17 respectively. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Yu Dong Ping monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Han Hongwen ID Number 200149, Liu Jun ID Number 202821 and Ji Jingang ID Number 205771, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-4132, to weld Tower Diaphragm Flange Plate Assembly SA228 to 15M(W) Tower Diaphragm WSD1-SA19 at WJ WSD1-SA19-2. The QA Inspector randomly observed ZPMC QC under the

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

supervision of ZPMC CWI Yu Dong Ping monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

OBG Bay 7:

The QA Inspector randomly observed ZPMC welder Li Wenguo ID Number 066261, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-U2-FCM, to weld the 30 mm end sections to the 12 mm center sections on various Floor Beam Sub-Assemblies. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G(2F) (Horizontal Groove/Horizontal Fillet) Position with ZPMC WPS WPS-345-SMAW-2G(2F)-Repair, to perform a weld repair to Far Side WJ 034 on piece mark CASD 24/PP36. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Li Jia, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

Bay 8:

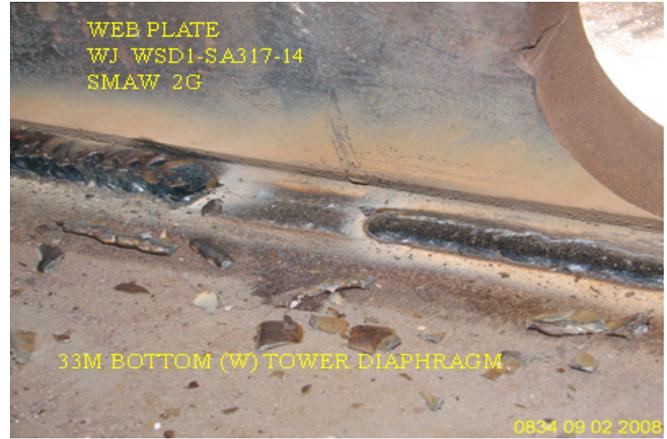
The QA Inspector randomly observed ZPMC welder Li Guoping ID Number 045251 utilizing the SMAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld Bent Flange (2 each), to the ends of Floor Beam Diaphragm FB003-109 AT wj 003. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Xiao He Xia ID Number 045273, utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the butt splice in Tower Diaphragm at WJ WSD1-SA290-13B. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID Numbers 037944 and 066734, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-4132, to weld Tower Diaphragm Flange Plate Assembly SA374 to 38M(W) Tower Diaphragm WSD1-SA370 at WJ WSD1-SA370-2. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Li Jia monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 299 amps, 30.1 volts with a travel speed of 301 mm/min for welder ID 037944 and 302 amps, 30.5 volts with a travel speed of 294 mm/min for welder ID 066734. The weld parameters appeared to comply with contract requirements.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

As noted in the above body of this report.

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 13816942685, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Carreon,Albert

QA Reviewer