

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-007787**Date Inspected:** 10-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Liu Xiao Zhong, Yu Dong Ping	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	

Summary of Items Observed:

The Caltrans (CT) 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).

Heavy Equipment Shop Bay 10:

The QA Inspector randomly observed ZPMC production personnel performing heat straightening operations on a Lift 4 South Tower Skin C longitudinal stiffener per ZPMC Heat Straightening Request HSR1 (T)-9810. The QA Inspector randomly observed ZPMC QC monitoring the temperature. The temperature appeared to be in compliance with the approved HSR.

The QA Inspector randomly observed ZPMC welders ID 207745 and ID 050295 on the top of Lift 3 South Tower utilizing the Submerged Arc Welding (SAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-C-U2b-S-2, to weld the long seam between Skin Plates B and C at Weld Joint (WJ) SSTL3-1B/K-82B. The QA Inspector randomly observed ZPMC Quality Control (QC) monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID 051413 and ID 0503060 on the top of Lift 3 South Tower utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the long seam between Skin Plates A and B at WJ SSTL3-1B/K-83B. The QA Inspector randomly observed ZPMC Quality Control (QC) monitoring weld parameters. Weld parameters appeared to comply with contract

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requirements.

Heavy Equipment Shop Bay 11:

The QA Inspector randomly observed ZPMC welders ID 069043 and ID 067184, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2332-TC-P5-F with Gantry 1 mounted welding apparatus, to weld longitudinal stiffeners to Lift 4 East Tower Skin Plate C at WJ's ESD1-FCSA4-2B/C-19 and 20 respectively. The QA Inspector randomly observed ZPMC (QC) monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID 066484 and ID 066479, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2332-TC-P5-F with Gantry 2 mounted welding apparatus, to weld longitudinal stiffeners to Lift 4 East Tower Skin Plate C at WJ's ESD1-FCSA4-2B/C-2 and 3 respectively. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID 068920 and ID 067328, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2332-TC-P5-F, to weld longitudinal stiffeners to Lift 4 East Tower Skin Plate C at WJ ESD1-FCSA4-2B/C-5. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID 068493 and ID 067520, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2332-TC-P5-F, to weld longitudinal stiffeners to Lift 4 East Tower Skin Plate C at WJ ESD1-FCSA4-2B/C-6. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders ID 067947 and 068494, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-B-U4b-F, to weld long seam in Lift 3 East Tower between Skin Plates A and B at WJ ESTL3-4B/K-85B. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 322 amps, 31.7 volts with a travel speed of 290 mm per minute for ID 067947 and 318 amps, 31.5 volts with a travel speed of 290 mm per minute. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

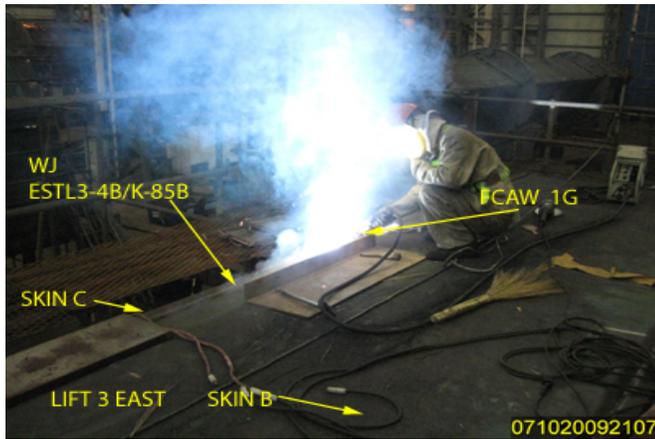
The QA Inspector randomly observed ZPMC welders ID 070212 and ID 067550, utilizing the FCAW Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-4332-TC-P4-F, to tack weld doubler plates to Lift 4 East Tower Skin Plate A at WJ's ESD1-FASA4-2B/E-15 and ESD1-FASA4-2A/E-27 respectively. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed 2 ZPMC welders utilizing the Carbon Air Arc Gouging (CAAG) Process to back gouge the welds attaching Longitudinal Stiffeners E-1 and E-2 to Lift 4 East Tower Skin Plate E. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations.

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 Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
