

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-001056**Date Inspected:** 18-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Wu Ming Kai & Cui Yi Ru	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	

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 Orthotropic Box Girders (OBG).

Bay 3 OBG:

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to remove cracked tack welds attaching I-Ribs to Side Plate SP41/PL90A, at Weld Joint (WJ) Numbers SP041-01, 02, 05 and 06. The QA Inspector randomly observed that base metal had been removed from both the Side Plate and the I-Ribs in several locations. ZPMC Quality Representative Fu Yuhong informed the QA Inspector that ZPMC would generate Critical Weld Repairs for those areas where base metal was removed. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Li Mengqian ID Number 054460, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-2231-U2-F in the 1G position to weld the root pass in a butt splice at WJ EP002-01-002. ZPMC CWI Wu Ming Kai informed the QA Inspector that the 22 millimeter (mm) thick steel plates being spliced, were to be used to cut into I-Ribs. The QA Inspector randomly observed ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 300 amps, welding voltage 29.8 volts. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Gu Caihong ID Number 053748, utilizing the Submerged Arc Welding (SAW) Process with ZPMC approved Weld Procedure Specification (WPS)

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WPS-B-T-2221-B-Lc2-S-1 in the 1G position to weld the fill and cover passes in a butt splice between Side Plate SP39 Sub-Assembly Sections piece marks PL89A and PL89B at WJ SP039-01-071. The QA Inspector randomly observed a 4.8 metric ton weight placed on PL89B with dunnage under PL89A approximately 300mm from the WJ. The QA Inspector also randomly observed that the far end of PL89A was being held down by Side Plate SP25/PL80, which had been placed over the far end of PL89A. WJ SP039-01-071 was in positive deflection as a result of the configuration of the weight and dunnage placement. ZPMC Quality Representative Fu Yuhong informed the QA Inspector that the plate would be flipped over and back gouged, and that the WJ would be in negative deflection for welding on that side. The QA Inspector randomly observed ZPMC CWI Wu Ming Kai, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 490 amps, welding voltage 31 volts with a travel speed of 412 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photographs provide additional detail.

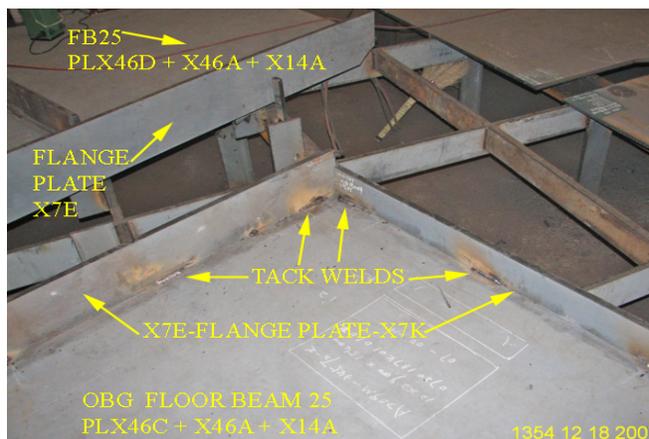
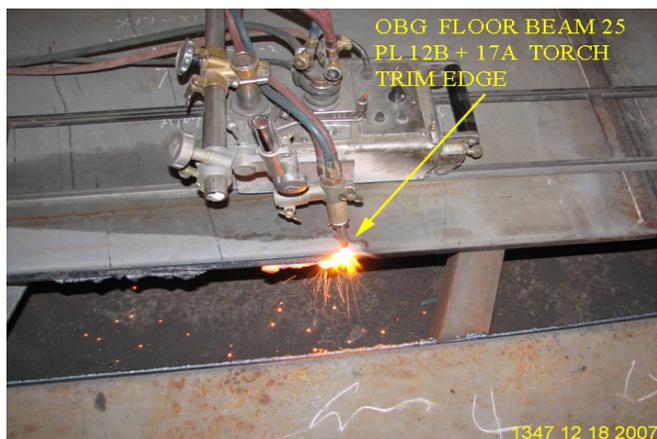
Bay 4 OBG:

The QA Inspector randomly observed ZPMC Non-Destructive Technician Cai Xin Xin, utilizing the Magnetic Particle Testing (MT) Method to examine the cover passes in the FCAW fillet welds attaching T-Stiffeners to Side Plate SP18/PL76C. There appeared to be no indications.

Bay 7 OBG:

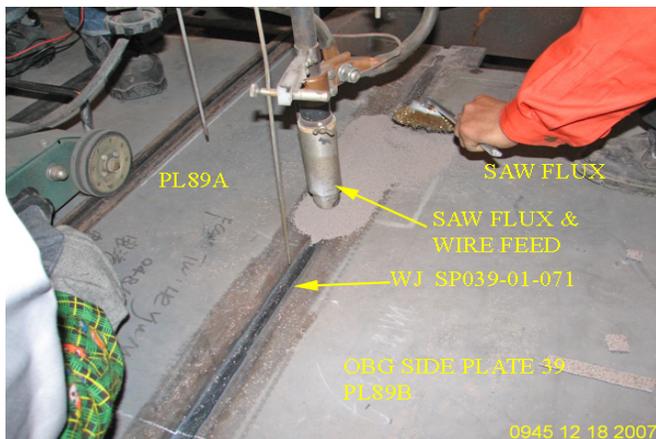
The QA Inspector randomly observed ZPMC welder Wang Chenfa ID Number 058102, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-P-2122 in the 2F position to tack weld Flange Plates piece marks X7E and X7K to Floor Beam Webs X46D+X46A+X14A (WJ's FB001-01-021, 026) and X46C+X46A+X14A (WJ's FB007-01-021, 023). The WJ's identify the Floor Beam Webs and are not the Flange to Floor Beam Web WJ's. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC torch cutter utilizing a track mounted torch cutting apparatus to trim the edges of Floor Beam Sub-Assembly X12B+X17A (WJ FB025-02-080). The attached photograph provides additional detail.



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Summary of Conversations:

There were 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer