

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-001311**Date Inspected:** 20-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:** 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:** 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 ZPMC Quality Control (QC) Personnel marking up areas for pick ups on the Flux Cored Arc Welding (FCAW) Process welds attaching T-Stiffeners to Side Plate SP51/PL95A, at Weld Joint (WJ) Numbers SP051-01-016, 017, 020, 021, 024, 025, 028 and 029. The attached photographs provide additional detail.

Bay 7 OBG:

The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the Shielded Metal Arc Welding (SMAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-P-2112 in the 2F position to tack weld Flange Plate X7J on Floor Beam Web FB001-03, Plates X46A + X46D + X14A. 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 ZPMC welder Yuan Wensong ID Number 055491, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to weld the root pass in Floor Beam Sub-Assembly FB025-01 at WJ's FB025-01-081, 101. The QA Inspector randomly

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observed ZPMC CWI Li Zhijiang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 280 amps, welding voltage 29 volts with a travel speed of 495 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the SMAW Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-P-2112 in the 2F position to tack weld Flange Plate X7J on Floor Beam Web FB001-02, Plates X46A + X46C + X14A. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

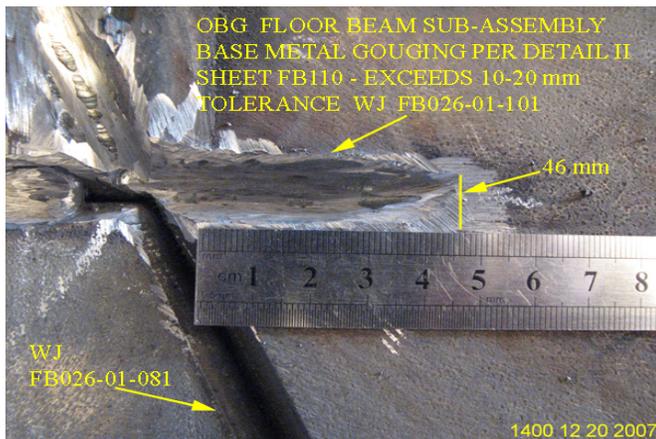
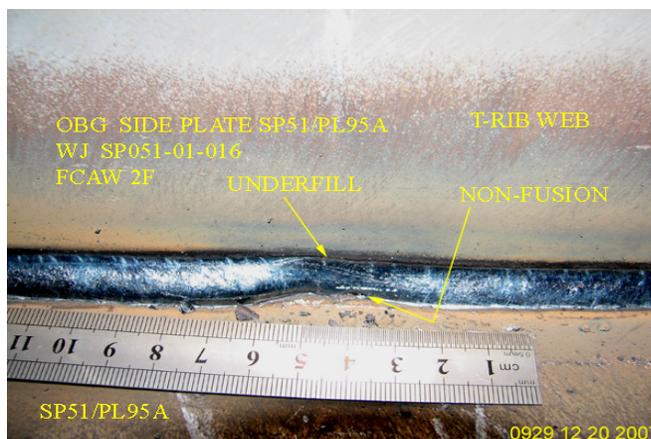
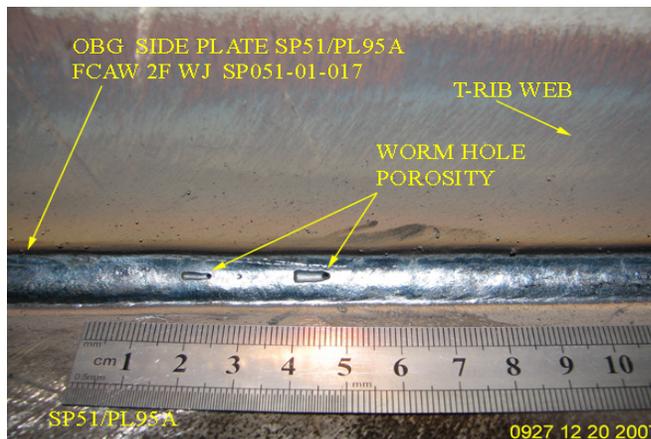
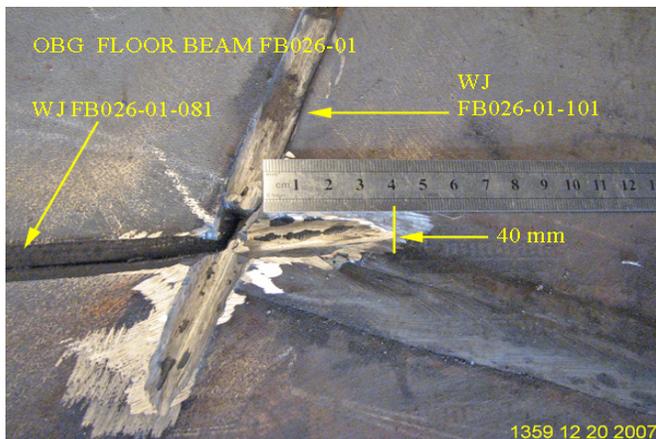
The QA Inspector randomly observed ZPMC welder Chen Chuansong ID Number 044824, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to tack weld Floor Beam Sub-Assembly FB025-02 at WJ's FB025-02-081 (PL X12B to X19A), 101 (PL X12B + X17B to X19A + X19B). The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Chen Chuansong ID Number 044824, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to weld the root pass on Floor Beam Sub-Assembly FB018-02 at WJ's FB018-02-081 (PL X12E to X20A), 101 (PL X18A to X20A + X20B). The QA Inspector randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Chen Chuansong ID Number 044824, utilizing the FCAW Process with ZPMC approved WPS WPS-B-T-2231-B-U2-F-1 in the 1G position to weld the root pass Floor Beam Sub-Assembly FB018-02 at WJ's FB026-01-081 (PL X12F to X18B), 101 (PL X18B to X20A + X20B). The QA Inspector randomly observed that the "Additional gouging of the base metal..." per Detail II of Sheet FB110, exceeded the criteria of 10 to approximately 20 mm per Detail II of Sheet FB110. The QA Inspector randomly observed that the additional gouging of the base metal at the end of WJ FB026-01-081 was 40 mm, and on WJ FB026-01-101 it was 46 mm. Refer to "Conversations & Comments" section for a summary of conversations. The attached photographs provide additional detail. The QA Inspector also randomly observed ZPMC CWI Wu Ming Kai monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

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Summary of Conversations:

The QA Inspector discussed the excessive gouging of the base metal on Floor Beam Sub-Assembly FB026-01 at WJ's FB026-01-081, 101 with ZPMC CWI Cui Yi Ru and American Bridge/Fluor Enterprises Representatives Kevin Dye and Dave LaRue. Mr. LaRue and Mr. Dye informed the QA Representative that they would follow up on the "Additional Gouging..." per Detail II of Sheet FB110 and inform the QA Inspector of the results.

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

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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
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Reviewed By:	Cochran,Jim	QA Reviewer
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