

**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-001196**Date Inspected:** 02-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 930**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**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 7 OBG:

The QA Inspector randomly observed ZPMC welder Yang Xuhe ID Number 057795, 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 X7G to Floor Beam Web FB015-01 Weld Joint (WJ) FB015-01-001, Plates X48A + X48B + X16A. 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 Wang Changfa ID Number 058102, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112 in the 2F position to tack weld Stiffeners X2J (WJ's FB007-03-013, 014), X2K (WJ's FB007-03-022, 023) and Gusset Type Stiffener X3K (WJ's FB007-03-029, 030) to Floor Beam Web FB007-03 T=12 millimeter (mm) thick Plate X14A of Floor Beam Web Plates X46C (T=30 mm F2 SPCM) + X46A (T=12 mm T2) + X14A (T=12 T2). 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 Hong Shuili ID Number 044815, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2132-1 in the 2F position to weld Stiffener

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X2K (WJ's FBO08-05-021, 022) and Gusset Type Stiffener X3L (WJ's FB008-05-037, 038) to Floor Beam Web FB008-05. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 288 amps, welding voltage 29.5 volts with a travel speed of 541 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112FCM in the 2F position to tack weld Stiffener X2K (WJ's FB007-03-047, 048) and Gusset Type Stiffener X3L (WJ's FB007-03-037, 038) to Floor Beam Web FB007-03 T=30 mm thick Plate X46C of Floor Beam Web Plates X46C (T=30 mm F2 SPCM) + X46A (T=12 mm T2) + X14A (T=12 T2). 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 Huang Xinlan ID Number 044780, utilizing the Submerged Arc Welding (SAW) Process with ZPMC approved WPS WPS-B-T-2221-B-L2c-S-1 in the 1G position to weld the seam weld in Floor Beam Sub-Assembly FB025-02 at WJ FBO25-02-101. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 545 amps, welding voltage 31.8 volts with a travel speed of 439 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Wang Min ID Number 048296, utilizing the Submerged Arc Welding (SAW) Process with ZPMC approved WPS WPS-B-T-2221-B-L2c-S-1 in the 1G position to weld the seam weld in Floor Beam Sub-Assembly FB025-02 at WJ FBO25-02-078. The QA Inspector randomly observed ZPMC CWI Cui Yi Ru, monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 531 amps, welding voltage 30.2 volts with a travel speed of 430 mm per minute. The weld parameters appeared to comply with contract requirements.

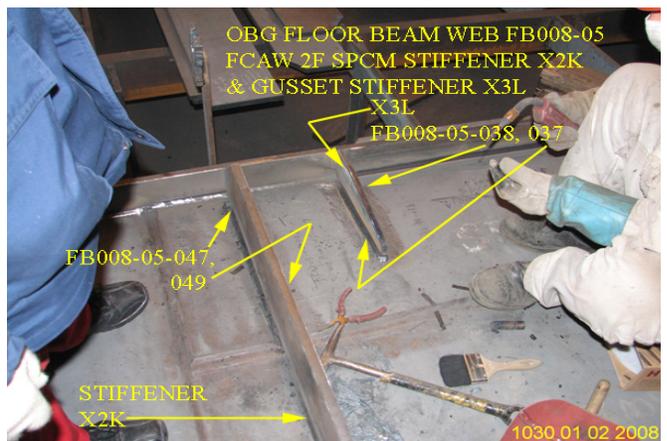
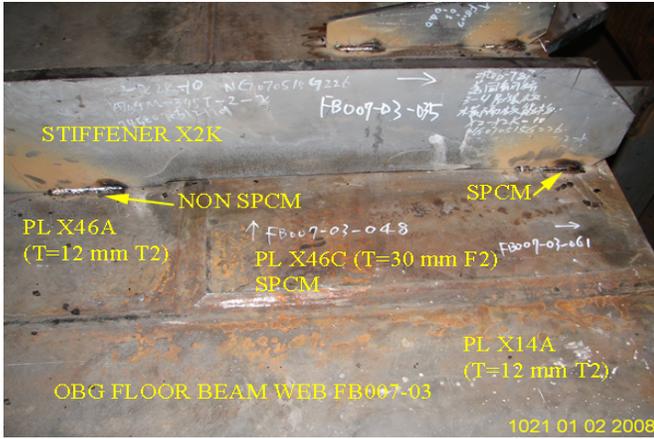
The QA Inspector randomly observed ZPMC welder Wang Changfa ID Number 058102, utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112 in the 2F position to tack weld Stiffeners X2J (WJ's FB008-06-013, 014), X2K (WJ's FB008-06-021, 023) and Gusset Type Stiffener X3K (WJ's FB008-06-029, 030) to Floor Beam Web FB008-06 T=12 mm thick Plate X15 of Floor Beam Web Plates X94A (T=30 mm F2 SPCM) + X47A (T=12 mm T2) + X16A (T=12 T2). The QA Inspector also randomly observed Mr. Wang utilizing the SMAW Process with ZPMC approved WPS WPS-B-P-2112FCM in the 2F position to tack weld Stiffener X2K (WJ's FB008-06-047, 048) and Gusset Type Stiffener X3L (WJ's FB008-06-037, 038) to Floor Beam Web FB008-06 T=30 mm thick Plate X94A of Floor Beam Web Plates X94A (T=30 mm F2 SPCM) + X47A (T=12 mm T2) + X16A (T=12 T2). 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 FCAW Process with ZPMC approved WPS WPS-B-T-2132-2 in the 2F position with an HIT-18-1D Automatic Welding Carriage, to weld Flange Plate X7H to Floor Beam Web FB008-04 at WJ FB008-04-002. The QA Inspector

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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.



**Summary of Conversations:**

There were no relevant conversations.

**Comments**

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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.

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<b>Inspected By:</b>	Franco,Charlie	Quality Assurance Inspector
<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer

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