

**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-007041**Date Inspected:** 19-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei / Sun Bo**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 Components**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).

**OBG Sub-Assembly Bay 12:**

The QA Inspector randomly observed ZPMC welder Liu Xie ID 066236, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions, with ZPMC Weld Procedure Specification (WPS) WPS-345-FCAW-2G (2F)-Repair-1 to weld an R2 repair to WJ 011 attaching a T=35 mm I-Rib to the base plate of Deck Plate 1AW-DP540-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 290 amps, 29.2 volts with a travel speed of 506 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 7 ZPMC helpers utilizing angle grinders to blend pickups on the edges of U-Rib connection plates, piece mark GG-X38 after base metal repairs.

The QA Inspector randomly observed ZPMC welder Song Da Wei ID 068852, utilizing the FCAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions, with ZPMC WPS WPS-345-FCAW-2G (2F)-Repair-1 to weld a repair to WJ 033 a U-Rib to the base plate of Deck Plate 1AW-DP570-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters

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and recorded them as follows: 285 amps, 27.8 volts with a travel speed of 490 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 9 magnetic drill operators and 9 helpers, utilizing magnetic drills with hole saw bits, to cut bolt holes in connection plates piece mark OBE1C-X38.

The QA Inspector randomly observed ZPMC welder Lu Liang ID 059373, utilizing the FCAW Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U2a to tack weld a backing bars to U-Ribs, to allow for the fit up of U-Rib Extensions on Deck Plate 1AE-DP610-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Song Da Wei ID 068852, utilizing the FCAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions, with ZPMC WPS WPS-345-FCAW-2G (2F)-Repair-1 to weld R1 repairs to WJ's 012 and 018, attaching a T=35 mm I-Rib to the base plate of Deck Plate 1AW-DP570-001 and WPS-345-FCAW-3G(3F)-Repair-1 to weld an R1 repair to WJ 254. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 1 ZPMC helper utilizing a pencil grinder to blend the copes after torch cutting, at the bottom of the U-Rib to U-Rib Extension welds on Deck Plate 1AW-DP545-001.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder to blend the U-Rib Extension welds to the base plate (2G/2F) and to the U-Ribs (3G) on Deck Plate 1AW-DP560-001.

The QA Inspector randomly observed ZPMC welder Lu Liang ID 059373, utilizing the Gas Metal Arc Welding (GMAW) Process in the (Horizontal Groove/Horizontal Fillet) Positions with ZPMC WPS WPS-B-T-2342-U5(U-Rib) to weld the root pass on the U-Rib Extensions to the base plate on Deck Plate 1AE-DP610-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

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 Eric Tsang 150-0042-2372, 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>	Clifford,William	QA Reviewer

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