

**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-007042**Date Inspected:** 22-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 6 magnetic drill operators and 3 helpers, utilizing magnetic drills with hole saw bits, to cut bolt holes in connection plates piece marks OBE1C-X38 (A709 GR 345 T2-X T=8).

The QA Inspector randomly observed excavations in the 30 mm radius copes at the ends of the welds attaching T=35 mm I-Ribs to the base plate on Deck Plate 1AW-DP565-001 at WJ's 011 and 019.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder to blend the cover pass on the seam welds attaching U-Rib Extensions to the U-Ribs (3G/3F) on Deck Plate 1AE-DP595-001.

The QA Inspector randomly observed 1 ZPMC helper utilizing a pencil grinder to shape the copes at the seam welds attaching U-Rib Extensions to the U-Ribs (2G/2F) on Deck Plate 1AE-DP610-001.

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to clean out excavations after Carbon Air Arc Gouging (CAAG) for R2 repairs in WJ's 013 and 017 attaching T=35 mm I-Ribs to the base plate (2G/2F) on Deck Plate 1AW-DP545-002.

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## WELDING INSPECTION REPORT

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The QA Inspector randomly observed a ZPMC utilizing the CAAG Process to excavate an area in WJ's 015, attaching T=35 mm I-Ribs to the base plate (2G/2F) on Deck Plate 1AW-DP545-002. The area had been marked by ZPMC Quality Control as rejected due to Ultrasonic Testing (UT) Examination.

The QA Inspector randomly observed ZPMC welders Liu Xie ID 066236 and Liu Dai Quan ID 066401, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-345-SMAW-2G(2F)Repair-1 to weld R2 repairs to WJ's 021 and 013 respectively, attaching T=35 mm I-Ribs to the base plate on Deck Plate 1AW-DP555-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 2 ZPMC helpers utilizing angle grinders to excavate areas in WJ 001 through 006 in Deck Plate 7EE-DP496-001. These areas had been previously marked up after UT Examination.

The QA Inspector randomly observed ZPMC welder Hang Hong Wen ID 200149, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U2a to weld the U-Rib Extensions to U-Ribs on Deck Plate 1AE-DP595-001. 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 Xiang Jie ID 059378, utilizing the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2342-B-U5 (U-Rib) to weld the U-Rib Extensions to the base plate on Deck Plate 1AE-DP595-001 at WJ's 292 and 031. 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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