

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020863**Date Inspected:** 02-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Geng Wei**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:** BAY 14 OBG**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Robert A. DeArmond was present during the time noted above and conducted observations relative to the work being performed.

**OBG BAY 14**

During a random observation by this QA Inspector in Bay 14 it was noted that ZPMC personnel was welding on Deck Plate DP3152-001-016 (PL3348 SPCM) to the Diaphragm Plate (X4121 SPCM). The following issue was discovered at this location. ZPMC welder No.067665 was utilizing the Flux Cored Arc Welding (FCAW) process in the horizontal (2G) position under WPS(s) WPS-B-T-2232-ESAB. The welding parameters that were taken by this QA inspector were as follows; Amperage 295 and Voltage 41.5. Which were outside the approved WPS. The weld is a complete joint penetration weld (CJP) that did not appear to comply with the contract documents. This QA inspector informed ZPMC QC, Mr. Wang Lu and ABF QA inspector Mr. Shao Jian Yuan of this issue and that an incident report would be generated concerning this issue. For further details, refer to the incident report issued by this QA inspector on this date and the attached photos.

**Magnetic Particle Testing (MT)**

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. All components were as listed on NWIT notification no. 07587. The member(s) is/are identified as Corner Assembly. The weld designations reviewed are as follows:

CA3013B-105, 106, 103, 104, 101, 102, 099, 100, 056, 057, 060, 061, 064, and 065

CA3013C-109, 110, 147, 148, 149, 150, 107, 108, 012, 013, 010, 011,

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# WELDING INSPECTION REPORT

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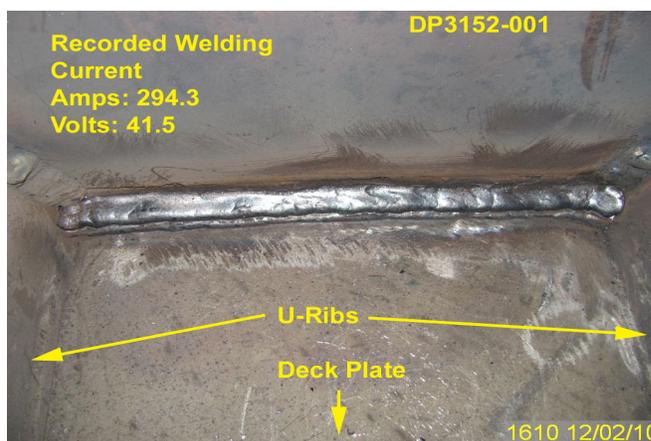
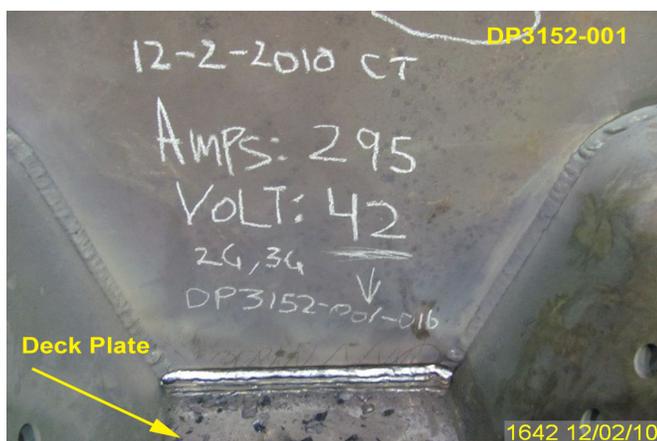
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FCAW welding of complete joint penetration weld joint(s) located on U-Rib to Diaphragm Plate and Diaphragm Plate to Deck Plate identified as DP3152-001 weld number(s) 063, 068, and 076. Welder is identified as welder no. 067665. The welding variables recorded by ZPMC QC identified as Shao Jian Yuan appeared to comply with applicable WPS(s) WPS-B-T-2232-ESAB and WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on U-Rib to Diaphragm Plate and Diaphragm Plate to Deck Plate identified as DP3150-001 weld number(s) 063, 068, 076, and 084. Welder is identified as welder no. 207465. The welding variables recorded by ZPMC QC identified as Shao Jian Yuan appeared to comply with applicable WPS(s) WPS-B-T-2232-ESAB and WPS-B-T-2233-ESAB.

FCAW welding of complete joint penetration weld joint(s) located on U-Rib to Diaphragm Plate and Diaphragm Plate to Deck Plate identified as DP3151-001 weld number(s) 063, 068, 076, and 084. Welder is identified as welder no. 066751. The welding variables recorded by ZPMC QC identified as Shao Jian Yuan appeared to comply with applicable WPS(s) WPS-B-T-2232-ESAB and WPS-B-T-2233-ESAB

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

As mentioned above between QA and QC concerning this project

### 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 Jim Devy 150-002-6784, who represents the Office of Structural Materials for your project.

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**Inspected By:** DeArmond, Robert

Quality Assurance Inspector

**Reviewed By:** Riley, Ken

QA Reviewer