

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-001519**Date Inspected:** 16-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Sun 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:** OBG DP U-ribs**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to perform observations of the welding of Orthotropic Box Girder (OBG) U ribs Production Monitoring Test (PMT) and Production Panel, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector Viars observed the Production Monitoring Test for Production Panel DP015-001 closed rib welds in Bay #1. ZPMC welding personnel performed Gantry Machine Gas Metal Arc (GMAW) for the root pass and Submerged Arc Welding (SAW) for the cover. Dual process WPS-B-T-2342-U1 (U-rib)-3 was posted as the Welding procedure specification for closed rib welding. The following weld joint and welder were recorded for the PMT, weld joint (wj) wj # 1 Mr. Han Chang Hou, wj # 2 Mr. Chen Jie, wj # 3 Mr. Gao Xin Dong, wj # 4 Mr. Jiang Ting Guang, wj # 5 Mr. Zhao Cheng Shuang and wj # 6 Mr. Yuan Fengchuan. ZPMC personnel performed Gas Metal Arc Welding (GMAW) for the first pass and Submerged Arc Welding (SAW) for the second pass. Welding operator for both processes was Mr. Li Xide.

Caltrans QA representatives Greg Bertlesman and Larry Viars performed random visual inspection of the U-rib PMT and production panel tack welds, root gap measurements and weld spacing. The joint fit up and tack welding appeared to be in conformance with the contract documents.

Caltrans QA representative Mr. Greg Bertlesman observed an area of incomplete fusion measuring 270 mm on DP015-001 weld # 3 SAW cover pass prior to ZPMC designating the 500 mm of test area for the PMT.

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# WELDING INSPECTION REPORT

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Caltrans QA observed the following during the welding of the U-ribs for DP058-001. Areas of rust, fins and tears were noted on the weld joint prior to the GMAW root pass. Incomplete fusion was observed on Production panel DP015-001 SAW cover pass. Please see the attached photo of incomplete fusion on weld joint # 1.



## Summary of Conversations:

As identified within the contents of this report.

## 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Viars,Larry	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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