

**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-002964**Date Inspected:** 14-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Chen Xi**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 and Tower**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to perform Visual Testing (VT) of the Orthotropic Box Girder (OBG) components and random visual observations of Tower components, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

The Caltrans QA Inspector observed ZPMC personnel preheating Tower Skin Plate Face C SSD1-SA179 (root pass) and SSD1-SA180 Skin Plate Face D (fill passes).

The Caltrans QA Inspector observed welder Hao Long performing Gas Metal Arc Welding (GMAW) of Deck Panel DP586-002 tack welds. The following welding variables were recorded during welding operations, amperage 334, voltage 29.4 and a travel speed of 545. The above mentioned welding appears to be in conformance with the posted Welding Procedure Specification, WPS-B-T-2342-U2 (u-rib).

The Caltrans QA Inspector performed visual inspection of OBG 13.560 meter deck panel DP546-001 (welds 004 through 007) U-rib Partial Joint Penetration (PJP) welds. Visual testing of welding was performed in accordance with contract documents. The following discontinuities were found during inspection on the Submerged Arc Welding (SAW) cover pass, incomplete fusion, undercut, and underfill. Welding discontinuities were marked on deck panel with a permanent marker, length and Y location recorded. Visual Inspection results were distributed to the appropriate personnel for review. A summary of discontinuities on inspected U-rib PJP welds are listed below.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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DP546-001

DP546-001-004, Underfill 15 areas, Overlap 5 areas, and Undercut 1 area

DP546-001-005, Underfill 12 areas and Incomplete Fusion 2 areas

DP546-001-006, Underfill 3 areas, and Overlap 2 areas

DP546-001-007, Underfill 12 areas, Undercut 3 areas and Overlap 1 area

**Summary of Conversations:**

No relevant conversations occurred this date.

**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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