

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-001779**Date Inspected:** 20-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1800**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:** Zhu Zhonghai**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:** 89 Mock-up & OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present observe repair welding of the 89 meter mock-up and perform Visual Testing (VT) of the Orthotropic Box Girder (OBG) 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 performing Shielded Metal Arc Welding (SMAW) repair welding of the 89 meter mock-up diaphragm to stiffener weld on the inside of the 89 meter mock-up. When ask to produce the repair WPS ZPMC QC Zhu Zhonghai relayed that the WPS was located in ZPMC main office and gave the WPS numbers. Two hours later repair WPS-345+485-SMAW-2G(2F) Repair-1 and WPS-345+485-SMAW-3G(3F) were posted at the mock-up location. Mr. Zhu Zhonghai stated the repair was a in process repair for undercut found at the diaphragm to stiffener weld on the diaphragm weld toe and the repair would be performed on all skin plates in the inside due to undercut up to 1.5 mm.

The Caltrans QA Inspector performed visual inspection of OBG 9.960 meter deck panel DP272-001 (welds 001 through 003) and 16.360 meter deck panel DP008-001 (welds 004 through 006) 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, overlap, undercut, underfill and oversize welds. 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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DP272-001

DP272-001-001, Overlap 13 areas, and Underfill 7 areas.

DP272-001-002, Incomplete Fusion 2 areas, Overlap 18 areas, Undercut 1 area, and Underfill 1 area.

DP272-001-003, Overlap 5 areas, and Underfill 2 areas, and Oversize 1 area.

DP008-001

DP008-001-004, Overlap 12 areas, Underfill 4 areas, and Incomplete Fusion 3 areas.

DP008-001-005, Overlap 7 areas, Underfill 2 areas, and Incomplete Fusion 2 areas.

DP008-001-006, Overlap 5 areas, and Incomplete Fusion 9 areas.

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.

Inspected By:	Viars,Larry	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
