

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-004223**Date Inspected:** 19-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang hua**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**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Orthotropic Box Girder (OBG) and Tower, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	OBG PMT #2 OBG	NA	NA	Welding and Macroetch S

Bay 1: Caltrans QA inspector monitored OBG Production Monitoring Test (PMT) #2 at Gantry #1 for deck panels DP136-001 and DP474-001. The magnetic particle test (MT) of the tack welds was performed by ZPMC QC/MT inspector. The visual inspection of tack welds and root gap was performed by ABF, ZPMC and Caltrans. The ABF inspector is identified as Mr. Huang Wen Huang and ZPMC QC/CWI inspector, Mr. Li Yang hua. The start time for welding of the PMT is 01:35 hours and completion time 01:58 hours, 10-20-08. Caltrans QA inspector verified and documented the welding amperage, voltage and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) process, welds 1 thru 6. At the completion of the GMAW root pass and SAW cover pass. The welds were visually inspected by ABF, ZPMC and Caltrans. Caltrans QA inspector witness ZPMC QC/UT inspector identified as Xu Wei inspect the welds for depth of penetration and conformance. Caltrans QA inspector identified designated locations for macroetch sampling per contract requirements. The macroetch specimens were evaluated with a 7X optical comparator and accepted by ZPMC, ABF and Caltrans. See Caltrans U-ribs PMT Inspection Sheet, dated 10-20-2008 and ZPMC production monitoring test plate inspection report, dated 10-20-2008 for additional information.

PMT #1 was scrapped by ZPMC after welding of the root weld pass. Welding head #6 wire feeder ran out of wire

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after welding about 250mm of weld. It appeared that someone had cannibalized the welding spool for welding wire and forgot to reconnect the wire properly. ZPMC QA inspector, Mr. Shen Xue Jun elected to terminate the welding of PMT #1 and weld a replacement PMT identified as PMT #2.

2	Deck Panel	NA	NA	Tack Welding
	OBG			

Bay 1: Caltrans QA inspector also observed ZPMC welder tack welding u-ribs to deck plate identified as DP474-001. The welder is identified as 059373. Caltrans QA inspector verified welding parameters for welding in progress. The welding appeared to be in accordance with posted welding procedure WPS-B-T-2342-U5 (U-rib), revision 0. The welding parameters measured as follows:

amps 329 - 343; volts 26.2 - 26.6; travel speed 545; electrode diameter 1.4mm. The welding appeared to be in conformance with the welding procedure.

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 Ady Velasco, 138-1694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
