

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-003883**Date Inspected:** 15-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Chih-Ming**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:** Various (see below)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG assembly bay 2

QA received one Non Destructive Testing (NDT) notification from ZPMC QA department. Notification document no. 01036. QA performed 10% Ultrasonic Testing (UT) verification on the following weld joints: Notification #01036, welds SSD19-PP030-008, SSD19A-PP030-006 and 131, SSD16A-PP020-007, 105 and 130, SSD16-PP020-013, 090 and 003 and R1 repairs on SSD17A-PP027-105 and 126. All welds appeared to be in compliance with AWS D1.5 2002 and the contract documents. QA noted that ZPMC UT technician has rejected the following welds listed on the above mentioned notification document: SSD19-PP030-108 and 135, SSD19A-PP030-105. QA also noted that three of the welds listed on the document, SSD19-PP030-131, SSD16-PP020-009 and SSD16A-PP020-126, had not been UT'ed by ZPMC. ZPMC QC Certified Welding Inspector (CWI) identified as Mr. Chen Chih-Ming, informed QA that these welds have been rejected visually for insufficient fillet reinforcement and would require repair prior to UT.

QA observed ZPMC personnel performing repairs to the tacked areas where crack like indications were identified with Phased Array Ultrasonic Testing (PAUT) of the Partial Joint Penetration (PJP) u-rib to deck plate welds on DP-055-001, DP-054-001 and DP-053-001.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

QA observed ZPMC qualified welding personnel FCAW joint SEG-013B-062 following the guide lines of WPS-B-T-2233-Tc-U4b-F. QC monitored the welding process continuously throughout the evening. The welder ID and welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

Volts: 25.5 Amps: 217 Travel speed: 122mm/min
Welder ID: 201215

QA observed ZPMC qualified welding personnel FCAW root on weld joint SEG-020-006 following the guide lines of WPS-B-T-2231-B-U2-F-1. QC monitored the welding process continuously throughout the evening. The welder ID and welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

Volts: 30 Amps: 290 Travel speed: 500mm/min
Welder ID: 055564

QA noted that ZPMC is continuing to fit and weld external diaphragms to OBG deck panels ignoring the "temporary suspension of fabrication" specific to the fit-up and welding of these diaphragms to the deck panels as outlined in state letter no. 05.03.01-002561 dated Aug. 15, 2008. This issue was written up by a Caltrans QA inspector in an incident report dated 9/4/08.



Summary of Conversations:

As mentioned above.

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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspected By:	Hall, Steven	Quality Assurance Inspector
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Reviewed By:	Cuellar, Robert	QA Reviewer
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