

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-014237**Date Inspected:** 22-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Shi Gang**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:** Bay 9 and 12**Summary of Items Observed:**

On this day Caltrans OSM Quality Assurance (QA) Inspector Christopher D'souza was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

Bay 12

QA Inspector performed initial Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled "Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld" after conventional UT was performed on tack welded areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate. The deck panels examined are as follows:

DP3117-001: 12 tack weld location found compliant and 27 tack weld locations found non-compliant.

Tack weld locations found non-compliant are marked on U-rib and deck plate for ZPMC's reference for repair. See Caltrans U-rib to Deck Panel- Tack Weld Assessment sheets dated 22nd May, 2010 for further information on PAUT inspections.

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of OBG components previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QA

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Inspector observed no rejectable indications at the time of testing. Weld identification numbers were

DP3073-001-145, 146, 151, 152, 157, 158, 161, 162, 165, 166, 178, 179, 198, 199, 261, 262

This inspector performed In- Process inspections of production welding of deck panels in Bay 9. Welding was being performed on panel DP3075-001. The weld procedure was found to be WPS-B-T-2342-U1-(U-rib)-5. The welding operators were identified as follows:

Weld 1- 203805
Weld 2- 059378
Weld 3- 203805
Weld 4- 059378
Weld 5- 059418
Weld 6- 059421
Weld 7- 059418
Weld 8- 059421
Weld 9- 059416
Weld 10- 201788

ZPMC and ABF QC were present during the welding process and identified as Chen Shi Gang and Huang Wen Guang respectively. The ZPMC CWI was present during the welding process and identified as Guo Yanfei.

During FCAW root welding process, the welding parameters were verified by this inspector and were as follows:

Head 1, Weld 1- 365 Amps, 30.5 Volts
Head 2, Weld 2- 363 Amps, 30.5 Volts
Head 3, Weld 5- 365 Amps, 30.8 Volts
Head 4, Weld 6- 355 Amps, 30.3 Volts
Head 5, Weld 9- 350 Amps, 30.0 Volts
Head 6, Weld 10- 367 Amps, 30.0 Volts
Head 1, Weld 3- 360 Amps, 30.8 Volts
Head 2, Weld 4- 364 Amps, 30.3 Volts
Head 3, Weld 7- 372 Amps, 30.0 Volts
Head 4, Weld 8- 376 Amps, 30.0 Volts

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

Summary of Conversations:

No relevant conversations.

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 Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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Inspected By:	Dsouza, Christopher	Quality Assurance Inspector
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Reviewed By:	Carreon, Albert	QA Reviewer
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