

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-004684**Date Inspected:** 17-Nov-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 observed ZPMC personnel fitting diaphragms on deck super panels identified as DP-324-002, DP-297-001 and DP-351-002 / DP-487-001, DP-325-002 and DP-460-001. QA randomly observed the joint preparation and fit-up appeared to be in general compliance with the contract documents.

QA observed ZPMC personnel performing excavation by grinding of tacked areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate on DP-082-001 where crack like indications were verified by Caltrans technicians using the Phased Array Ultrasonic Testing (PAUT) method.

QA observed ZPMC qualified welding personnel back gouging Complete Joint Penetration (CJP) weld on unidentified OBG side or bottom panel splice joint. Available ZPMC QC identified as Mr. Geng Wei was unable to assist this QA in identifying the part and/or joint identification at the time QA was at this location.

QA observed ZPMC qualified welding personnel FCAW 3F Corner assembly bulkheads to side panel stiffeners following the guide lines of WPS-B-T-2133-(3f). QC monitor the welding process continuously throughout the

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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: 24.6 Amps: 215 Travel speed: 118mm/min
Welder ID: 201215 QC: Mr. Geng Wei

QA observed ZPMC qualified welding personnel SAW on weld joint SEG-005A-005 following the guide lines of WPS-B-T-2221-B-L2c-S-2. 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: 30.5 Amps: 585 Travel speed: 500mm/min
Welder ID: 045265 QC: Mr. Geng Wei

QA observed ZPMC qualified welding personnel FCAW 3F deck panel diaphragms to super panel deck panels DP-298-001 and DP-325-001 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 Amps: 204 Travel speed: 109mm/min
Welder ID: 044795 QC: Mr. Huang Shuai

This QA assisted Caltrans QA Mr. Ricardo Mandina perform Gate to Gate (G2G) preliminary Ultrasonic Testing (UT) at tacked areas on u-rib to deck plate PJP welds for the following deck panel:
DP-144-001:

Weld# 1 – 26 tacks UT'ed – 8 indications
Weld# 2 – 26 tacks UT'ed – 5 indications
Weld# 3 – 26 tacks UT'ed – 4 indications
Weld# 4 – 26 tacks UT'ed – 6 indications

The G2G UT on this deck panel is complete. Caltrans QA Mr. Ricardo Mandina recorded the "Y" locations of each indication on the deck panel tack weld assessment sheet and gave the written information to Caltrans QA task leader Mr. Mark Wright to be entered on the Caltrans team China server.

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Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

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.

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