

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-015064**Date Inspected:** 21-Jun-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:****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 4, Bay 9**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 9

ZPMC NWIT 006024

OBG U – Rib Diaphragm

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

DP 3092 (PL3188B) – 001 – 251, 252, 261, 262

DP 3087 (PL3183A) – 001 – 91, 92, 93, 94

DP 3086 (PL3182A) – 001 – 145, 146, 147, 148

DP 3094 (PL3190A) – 001 – 157, 158, 187, 188

DP 3089 (PL3185A) – 001 – 68, 69, 110, 111

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Bay 4

QA inspector performed conventional Ultrasonic (UT) Inspection on deck panel tack weld areas. The inspection is preliminary prior to using the phased array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. QA inspector performed UT on deck panel DP3149-001(PL3345A) having 3 ribs, 6 welds, 54 total tack welds.

Weld 1 scanned 9 locations with 1 indication.

Weld 2 scanned 9 locations with 1 indications.

Weld 3 scanned 9 locations with 0 indication.

Weld 4 scanned 9 locations with 0 indications.

Weld 5 scanned 9 locations with 1 indications.

Weld 6 scanned 9 locations with 1 indications.

QA inspector performed conventional Ultrasonic (UT) Inspection on deck panel tack weld areas. The inspection is preliminary prior to using the phased array (PAUT) testing system to verify indications found with conventional Ultrasonic testing. QA inspector performed UT on deck panel DP3088-001(PL3184A/B) having 10 ribs, 20 welds, 180 total tack welds.

Weld 8 scanned 9 locations with 0 indication.

Weld 9 scanned 9 locations with 1 indications.

Weld 10 scanned 9 locations with 0 indication.

Weld 178 scanned 9 locations with 0 indications.

Weld 179 scanned 9 locations with 0 indications.

Weld 180 scanned 9 locations with 0 indications.

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:

DP3149-001: 2 tack weld location found compliant and 4 tack weld locations found non-compliant.

DP3088-001: 4 tack weld location found compliant and 5 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 21st June, 2010 for further information on PAUT inspections.

This QA Inspector was involved in PAUT (Phased Array Ultrasonic Testing) training for detection of cracked tacks in Deck Panels as per the following procedure "UT 04-0120F4 PJP Rib Weld Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds"

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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.

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