

**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-010967**Date Inspected:** 05-Jan-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:** Trial Assembly, Tower Bay, Deck Panel**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:

Trial Assembly

5BE - 5CE

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of OBE5-007, 008 and 009 (5BE-5CE Splice welds) and SEG024A-005, SEG026-007 previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3 and Detection of Transverse Planar Discontinuities with Significant Flaw Height Dimension Procedure. The QA Inspector observed no rejectable indication at the time of testing. The QA Inspector generated a TL-6027 UT report on this date. Weld identification numbers were

OBE5 - 007, 008 and 009

SEG024-005

SEG026-007

This QA Inspector performed conventional UT (Ultrasonic Testing) in conjunction with ABF UT department for detection of planar transverse indication.

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See Caltrans Ultrasonic Transverse Indication Evaluation sheet dated January 5th 2010 for further information on inspection.

## Bay 9

QA Inspector performed 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 ZPMC welding personnel performed weld repairs of tacked areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate. The deck panels examined are as follows:

DP3024-001: 12 tack weld locations found compliant and 6 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 5th January, 2010 for further information on PAUT inspections.

## Bay 10

On this date QA Inspector Christopher was given ZPMC NDT Inspection Notification Sheet, Document No. 004998. This QA Inspector performed required Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality control personnel, on the following items listed for the Tower in Bay No. 10:

NSD1-BPSA4-15-1A/B, 2A/B

SSD1-TL5 B/L-5A/B

SSD1-TL5 B/L-1A/B

The QA Inspector observed no rejectable indications at the time of testing.  
An Ultrasonic Testing Report (TL 6027> UT) was generated for the items above.

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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<b>Inspected By:</b>	Dsouza, Christopher	Quality Assurance Inspector
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<b>Reviewed By:</b>	Carreon, Albert	QA Reviewer
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