

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-013251**Date Inspected:** 29-Mar-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:** Du Zhi Qun**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:** Tower**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Shailesh Gaikwad 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:

**BAY 11:**

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as Tower Strut flange. The weld designations reviewed are as follows.

WD1-STSA4-5-127M-1-1A/B, 3A/B, SD1-STSA4-5-131M-1-1A/B, 3A/B, WD1-STSA4-5-131M-1-1A/B, 3A/B,

SD1-STSA4-5-135M-1-1A/B, 3A/B, WD1-STSA4-5-13M-1-1A/B, 3A/B

ED1-STSA4-6-123M-1, 2-1A/B, ND1-STSA4-6-123M-1, 2-1A/B, ED1-STSA4-6-127M-1, 2-1A/B, 3A/B,

ED1-STSA4-6-123M-1, 2-3A/B, ND1-STSA4-6-123M-1, 2-3A/B

ED1-STSA4-6-123M-1, 2-2A/B, ND1-STSA4-6-123M-1, 2-2A/B, ED1-STSA4-6-127M-1-2A/B, 4A/B,

ED1-STSA4-6-123M-1, 2-4A/B, ND1-STSA4-6-123M-1, 2-4A/B

WD1-STSA4-5-123M-1- 21A/B, 22A/B, SD1-STSA4-5-127M-1- 21A/B, 22A/B

WD1-STSA4-5-127M-1-21A/B, 22A/B

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NDT Notification No-005429

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as West Tower lift 4 A/B corner seam. The weld designations reviewed are as follows.

WSTL4-2B/L-59A/B, WSTL4-2L/L-4A/B

During Ultrasonic inspection "D scan " found transverse non conformable indication on weld joint No-WSTL4-2B/L-59A, at depth 14mm to 21mm. Incident report to be generated. For more information see below attach photos.

NDT Notification No-005432

This QA Inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6027 (UT) report for this date. The member is identified as Strut Flange. The weld designations reviewed are as follows.

ED1-STSA4-6-123M-1, 2-2, ND1-STSA4-6-123M-1, 2-2, ED1-STSA4-6-127M-1-2, 4,  
ND1-STSA4-6-123M-1, 2-4, ED1-STSA4-6-123M-1, 2-4

NDT Notification No-005434

This QA Inspector observed the following work in progress:

BAY 11

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 046704, 040656. Perform Shielded Metal Arc Welding (SMAW) on Transverse plate, buttering up to 18mm. Item identified as TD5-4. ZPMC QC Identified as Lijun, with Critical welding repair report CWR-T-CWR541 Rev. 1. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F)-Repair-1. For more information see below attached photo.

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040582, 052930. Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 4 D/E corner joint. Joint identified as NSTL4-3B/L-2A. ZPMC QC Identified as Wang Hao, with Temporary welding repair report WRR-T-WR3068. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-2G (2F)-Repair.

Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 053316. Perform Flux Core Arc Welding (FCAW) on West Tower lift 4 C/D corner Diagonal stiffener. Joint identified as WSTL4-2D/L-38. ZPMC CWI Identified as Lilin. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-3G (3F)-Repair.

This QA Inspector observed during random Visual inspection ZPMC MT inspector performing MT on I Ribs, item identified as WD1-A597. For more information see below attached photo.

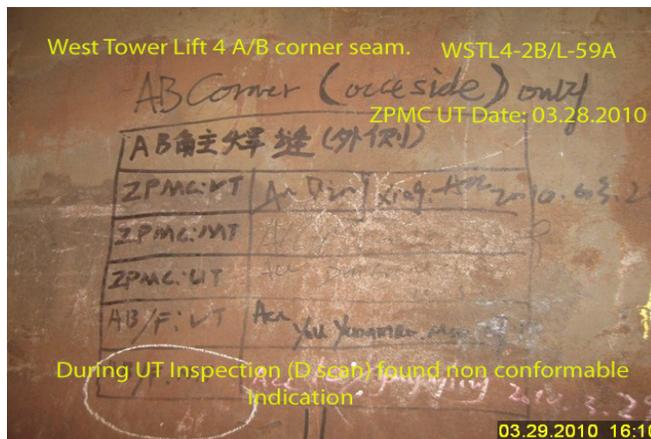
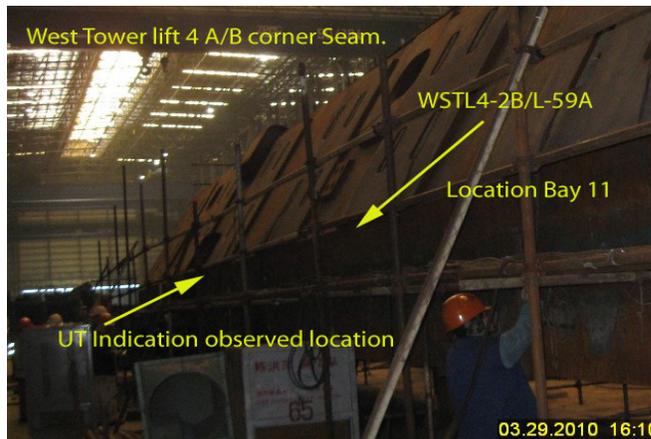
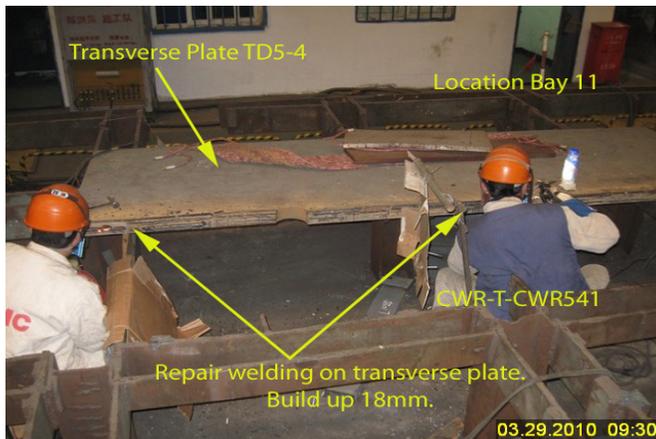
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BAY 10:

This QA Inspector observed ZPMC qualified welding personnel identified as 056364. Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 5, C/D corner joint. Joint identified NSD1-TL5-3B-F-37B, ZPMC QC Identified Deng Zhi Bing. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3212-Tc-U4b-1.

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



**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 Skyler Guest phone: 15000422360, who represents the Office of Structural Materials for your project.

**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer