

**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-013241**Date Inspected:** 17-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:** Ye Yong Jun**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 Trial Assembly**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:

**TOWER TRIAL ASSEMBLY:**

This QA Inspector performed Randomly Visual Inspection and 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 West, East, North Tower Lift 1, bearing Plate.

And south tower skin D doublers plate. The weld designations reviewed are as follows.

WSD1-SA225F/H-40,43,45, ESD1-SA296B/E-13,16,19,22, NSD1-SA17F/G-37,49,55,61,65,71,83,

SSD1-SA40A/E-1

NDT Notification No-005360

This QA Inspector performed Randomly Visual Inspection and 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 East, North Tower Lift 1, bearing Plate of skin A, D. The weld designations reviewed are as follows.

ESD1-SA237D/F-9,10, NSD1-SA22B/E-37

NDT Notification No-005364

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This QA Inspector performed Randomly Visual Inspection and 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 South tower lift1 skin A, doubler plate. The weld designations reviewed are as follows.

SSD1-SA15A/F-43

NDT Notification No-005365

## WEST TOWER LIFT 1

This QA Inspector observed ZPMC qualified welding personnel identified as 674947. Perform Flux Core Arc Welding (FCAW) on West Tower lift 1 skin B outside, bearing stiffener. Joint identified as WSD1-SA279-34, ZPMC QC Identified as Fu Wei Min, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

## EAST TOWER LIFT 1

This QA Inspector observed ZPMC qualified welding personnel identified as 066683. Perform Flux Core Arc Welding (FCAW) on East Tower lift 1 skin C outside, bearing stiffener. Joint identified as ESD1-SA294F/G-55, ZPMC QC Identified as Xing Shi shun, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F. For more information see below attached photo.

## NORTH TOWER LIFT 1

This QA Inspector observed ZPMC qualified welding personnel identified as 057266. Perform Flux Core Arc Welding (FCAW) on North Tower lift 1 skin E inside, bearing stiffener. Joint identified as NSD1-SA76-F/H-11, 3, 5. ZPMC QC Identified as Lu Wei Chao, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 057180. Perform Flux Core Arc Welding (FCAW) on North Tower lift 1 skin C inside, bearing stiffener. Joint identified as NSD1-SA17-F/G-27, 21,17. ZPMC QC Identified as Lu Wei Chao, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 040330. Perform Flux Core Arc Welding (FCAW) on North Tower lift 1 skin D inside, bearing stiffener. Joint identified as NSD1-SA22-B/E-29. ZPMC QC Identified as Lu Wei Chao, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 040261. Perform Flux Core Arc Welding (FCAW) on North Tower lift 1 skin E outside, exterior bearing stiffener. Joint identified as NSD1-SA76-F/H-4,45. ZPMC CWI Identified as Yu Yong Jun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

## Repair Welding

This QA Inspector observed ZPMC qualified welding personnel identified as 040345. Perform Shielded Metal Arc Welding (SMAW) on North Tower lift 1 skin D outside, exterior bearing stiffener. Joint identified as

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NSD1-SA22B/E-37, ZPMC CWI Identified as Yu Yong Jun with Critical welding report CWR-T-CWR605. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345SMAW-3G (3F) Repair.

## SOUTH TOWER LIFT 1

This QA Inspector observed ZPMC qualified welding personnel identified as 052075. Perform Flux Core Arc Welding (FCAW) on South Tower lift 1 skin B outside, exterior bearing stiffener. Joint identified as SSD1-SA18-35, ZPMC CWI Identified as Yu Yong Jun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2333-Tc-P4-F.

This QA Inspector observed during random Visual inspection, ZPMC Ultrasonic Testing (UT) Inspector performed UT on Corner joint of South Tower lift 1. For more information see below attached photo.

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.

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**Inspected By:** Gaikwad, Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford, William

QA Reviewer