

**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-015725**Date Inspected:** 15-Jul-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:** Mr. Gao Zhi Chun**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 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 Tower Strut. The weld designations reviewed are as follows.

ED1-STSA4-6-131M-1-95,96,97,98,19,30,37,58,59,64,79,80,76,5,6,83,84,67,51,44,50,35,36,91,92,73,74  
NDT Notification No-06201

This QA Inspector observed the following work in progress:

**BAY 11: SMAW Process.**

This QA Inspector observed ZPMC qualified welding personnel identified as 040667, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-20-2A. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

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This QA Inspector observed ZPMC qualified welding personnel identified as 040614, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as ESD1-SPSA5-12-2B. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040656, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-7-4B. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 046704, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-12-1B. ZPMC QC Identified as Liu Dao Feng, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1. For more information see below attached picture number 1.

### SMAW Process Repair Welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut, Joint identified as SD1-STSA4-5-139M-1-5B. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F) FCM-Repair-1.

### SMAW Process Repair Welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 040610, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut, Joint identified as SD1-STSA4-5-127M-1-6A. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F) FCM-Repair-1. For more information see below attached picture number 2.

### SMAW Process Repair Welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 044541, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut, Joint identified as WD1-STSA4-5-119M-1-47A/B. ZPMC CWI Identified as Yu Dong Ping with temporary welding repair report WRR-T-WR3379. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F) FCM-Repair-1.

### BAY 11 OBG Lift 13 Side plate:

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 046706 Perform Flux Core Arc Welding (FCAW) on Side plate of OBG lift 13. Joint identified as SP3104-001- 025, 062, ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 049220, 205649 Perform Flux Core Arc Welding (FCAW) on Side plate of OBG lift 13. Joint identified as SP3067-001- 019, 020, ZPMC QC Identified as Ma Qianli Ma. The welding parameters as measured using QC's calibrated instrument appeared to be

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in general compliance with WPS-B-T-2132.

## BAY 10, SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 057220, Perform Shielded Metal Arc Welding (SMAW) on inside the North tower lift 5 Stiffener, Joint identified as NSD1-TL5-3E-F-8B, 7, 5B. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3213-Tc-U5b and WPS-B-T-3313-Tc-P5.

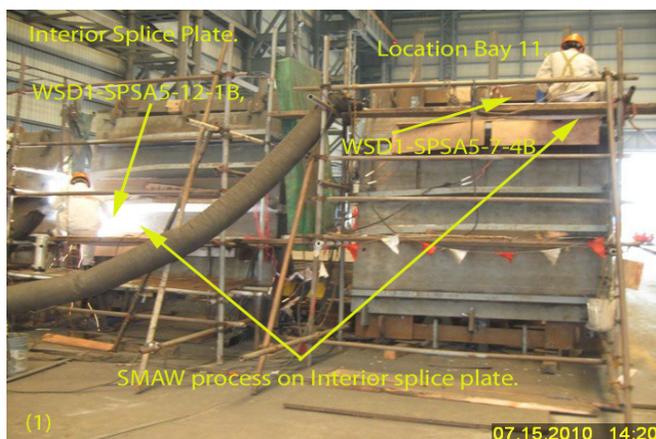
This QA Inspector observed ZPMC qualified welding personnel identified as 052930, Perform Shielded Metal Arc Welding (SMAW) on inside the North tower lift 5 Stiffener, Joint identified as NSD1-TL5-3B-F-12. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3313-Tc-P5.

## BAY 10 OBG Lift 13:

This QA Inspector observed ZPMC qualified welding personnel identified as 040533, 053870, 052075, 053869, Perform Flux Core Arc Welding (FCAW) on Edge plate of OBG lift 13. Joint identified as EP3017-001- 050, 051, 046, 047, 044, 045, ZPMC QC Identified as Yuan Hai Gang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 040533, 053870, 052075, 053869, Perform Flux Core Arc Welding (FCAW) on Edge plate of OBG lift 13. Joint identified as EP3024-001- 001~012, 021~030, ZPMC QC Identified as Yuan Hai Gang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

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

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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 Michael Ng Phone: 15921845703, who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Gaikwad,Shailesh | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Clifford,William | QA Reviewer                 |

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