

**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-015306**Date Inspected:** 22-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:** 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 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 Tower Strut. The weld designations reviewed are as follows.

ND1-STSA4-6-135M-2-5, 6, 9, 10, 73, 74

NDT Notification No-006037

This QA Inspector observed the following work in progress:

**BAY 11: SMAW Process**

This QA Inspector observed ZPMC qualified welding personnel identified as 044551, 040667, Perform Shielded Metal Arc Welding (SMAW) on Tower strut. Joint identified as WD1-STSA4-5-123M-1-37, 43, 38, 44 ZPMC CWI Identified as Yu Dong Ping, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113, and WPS-B-T-4113-1.

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This QA Inspector observed ZPMC qualified welding personnel identified as 251194, Perform Shielded Metal Arc Welding (SMAW) on Tower strut. Joint identified as WD1-STSA4-5-143M-1-35, 36, ZPMC CWI Identified as Yu Dong Ping, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2112.

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 ED1-STSA4-6-143M-1-74A/B, ZPMC QC Identified as Mao Bin Bin, with temporary welding repair report WRR-T-WR3424. 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 041271, Perform Shielded Metal Arc Welding (SMAW) on Tower strut. Joint identified as ED1-STSA4-6-143M-1-5A/B, ZPMC QC Identified as Mao Bin Bin, with temporary welding repair report WRR-T-WR3423. 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.

This QA Inspector observed ZPMC qualified welding personnel identified as 046709, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as ESD1-SPSA5-7-1B. 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-3211-Tc-U5b-1. For more information see below attach picture number 1.

This QA Inspector observed ZPMC qualified welding personnel identified as 040611, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as ESD1-SPSA5-20-2B. 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-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-SPSA5-12-3B. 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-3211-Tc-U5b-1.

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 Yu Zhi Lai, The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3211-Tc-U5b-1.

Magnetic Particle Testing:

This QA Inspector observed ZPMC Magnetic Particle Testing Inspector, performed MT on Tower Strut web to flange joints. Item identified as ND1-STSA4-6-135M-2. For more information see below attach picture number 2.

BAY 10: SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 044511, Perform Shielded Metal Arc

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Welding (SMAW) on Interior splice plate. Joint identified as NSD1-SPSA5-6-2A, 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-3211-Tc-U5b-1. For more information see below attach photo number 2.

This QA Inspector observed ZPMC qualified welding personnel identified as 050266, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as SSD1-SPSA5-6-3B, 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-3211-Tc-U5b-1.

SMAW Process, Repair Welding.

This QA Inspector observed ZPMC qualified welding personnel identified as 053049, Perform Shielded Metal Arc Welding (SMAW) on Interior Splice plate. Joint identified as SSD1-SPSA5-19-1A/B, ZPMC QC Identified as Yu Zhi Lai, with temporary welding repair report WRR-T-WR3421. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-485-SMAW-2G (2F)-Repair-1

SMAW Process, Repair Welding.

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, Perform Shielded Metal Arc Welding (SMAW) on Skirt plate. Joint identified as SSD1-A681-1, ZPMC QC Identified as Jiang Xiao Bo, with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-1G (1F)-Repair-Misdrilled Hole.

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 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