

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018097**Date Inspected:** 08-Nov-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. Qiu Wen.**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 and Orthotropic Box Girder (OBG)**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:

NDT

BAY 10

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 skirt plate. The weld designations reviewed are as follows.

SD1-A712C/F-92, 93, 94

NDT Notification No-07278

This QA Inspector observed the following work in progress:

BAY 10

Tower lift 6, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040302, 053869, Perform Flux Core Arc Welding (FCAW) on Tower lift 6 face A plate. Joint identified as NSD1-FBSA6-3-1, 2. ZPMC QC Identified as Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

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OBG Bike path Repair welding, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040302, 053869, Perform Flux Core Arc Welding (FCAW) on OBG bike path. Joint identified as BK004A1-030-043. ZPMC QC Identified as Yu Zhi Lai with temporary welding repair report WRR-B-WR16696. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-2G (2F)-Repair. For more information see below attached picture number 1.

OBG Bike path, SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 056200 Perform Shielded Metal Arc Welding (SMAW) on OBG bike path. Joint identified as BK004A8-028-003, 010, 122, 124, 008, 127, 128. ZPMC QC Identified as Lijun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2113.

OBG Bike path plate FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 057258, Perform Flux Core Arc Welding (FCAW) on OBG bike path. Joint identified as BK004A4-027-004, 005, 056, 057. ZPMC QC Identified as Lijun. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

SMAW Process, Repair welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 053258 Perform Shielded Metal Arc Welding (SMAW) on Tower lift 5 Bottom cover plate, weld build up on edge 22mm in Thick and 130mm in length. Plate identified as GC5-12. ZPMC QC Identified as Li Peng Fei with Critical welding repair report CWR-T-CWR 677. 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 picture number 2.

BAY 11

SAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 056975, 040699 Perform Submerged Arc Welding (SAW) on Tower lift 5 Bottom cover plate. Joint identified as ESD1-TL5-2B/F-53B, 72B. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3221-B-U3c-S-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 04455, 040699 Perform Submerged Arc Welding (SAW) on Tower lift 5 cover plate. Joint identified as WSD1-TL5-4B/F-51B, 69B. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-3221-B-U3c-S-1.

Tower SMAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040724, Perform Shielded Metal Arc Welding (SMAW) on Tower Bracket Stiffener lift 5. Joint identified as ND1-BRSA5-2-19A. ZPMC QC Identified as Xu Jie. The welding parameters as measured using QC's calibrated instrument appeared to be in

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general compliance with WPS-B-T-3213-Tc-U5b.

OBG FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 054460, 044218 Perform Flux Core Arc Welding (FCAW) on U Rib splice plate. Joint identified as GGL-MQ-1958-056, 073, 098-1, 2. ZPMC QC Identified as Libin. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-Tc-U4b-F.

BAY 10, Green Tagging

This QA inspector performed Visual Inspection for Green Tagging which were previously tested and accepted by ZPMC Quality Control personnel Mr. Qiu Wen and ABF QA personnel Mr. Liu Cheng. The members are identified as OBG Bike path BK004A3-029-002, 010, BK004A5-029-002, 008. The green Tag number is identified as # 13764.

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 Thomas Ho phone : 150002048250, 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