

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-016010**Date Inspected:** 26-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. Xu Le Feng**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:

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 Façade plate. The weld designations reviewed are as follows.

ND1-SFSA4-176-13, 14, 15, 16, 9, 10, 11, 12

ND1-SFSA4-295-2, 4, 6, 8, 9, 10, 11, 12

NDT Notification No-06287

This QA Inspector observed the following work in progress:

BAY 11: SMAW Process.

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-SPSA5-7-3A. 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.

WELDING INSPECTION REPORT

(Continued Page 2 of 5)

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-SPSA5-17-3A. 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 054460, Perform Shielded Metal Arc Welding (SMAW) on Interior splice plate. Joint identified as WSD1-SPSA5-17-3A. 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 202100, 202338, Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2F-F-4. 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-3313-Tc-P5.

This QA Inspector observed ZPMC qualified welding personnel identified as 202354, 040614, Perform Shielded Metal Arc Welding (SMAW) on East Tower lift 5 Grillage plate, Joint identified as ESD1-TL5-2E-F-5. 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-3313-Tc-P5.

This QA Inspector observed ZPMC qualified welding personnel identified as 037996, 067993, 066155, Perform Shielded Metal Arc Welding (SMAW) on West Tower lift 5 Grillage plate, Joint identified as WSD1-TL5-4E-F-28B, 21A. 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-3213-Tc-U5b.

SMAW Process Repair Welding:

This QA Inspector observed ZPMC qualified welding personnel identified as 040667, Perform Shielded Metal Arc Welding (SMAW) on Tower Strut, Joint identified as ND1-STSA4-10-119M-1-9A/B, 10A/B. ZPMC QC Identified as Liu Dao Feng 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-2G (2F) FCM-Repair-1.

BAY 10,

SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 057258, 500363, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate. Joint identified as SSD1-TL5-1F-F-18A, 18B, 24A. 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-3213-Tc-U5b.

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, 040264, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate. Joint identified as SSD1-TL5-1F-F-19, 20. 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-3313-Tc-P5.

WELDING INSPECTION REPORT

(Continued Page 3 of 5)

This QA Inspector observed ZPMC qualified welding personnel identified as 050289, 057258, Perform Shielded Metal Arc Welding (SMAW) on South Tower lift 5 Grillage plate. Joint identified as SSD1-TL5-1E-F-11B, 5B. 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-3213-Tc-U5b.

BAY 10 OBG Lift 13, SAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040414, Perform Submerged Arc Welding (SAW) on Bike Path of OBG lift 13. Joint identified as BK004A1-031-009, 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-2221-B-L2c-S-2.

BAY 11:

During random in process observations this Caltrans Quality Assurance Inspector (QA) observed the following: ZPMC welder personnel performing Shielded Metal Arc Welding (SMAW) repair on Seismic Performance Critical Material (SPCM) without the Engineer approval. For third time repair engineer approval of a Critical Weld Repair (CWR) is required. The effected Tower Strut identified as ND1-STSA4-6-143M-2, Joint No identified as ND1-STSA4-6-143M-2-74A/B. The Material thickness is 32 mm. This Tower Strut is located in Sub assembly Bay#11. For further information, please see the attached pictures below. This QA inspector generated incident report on this date.

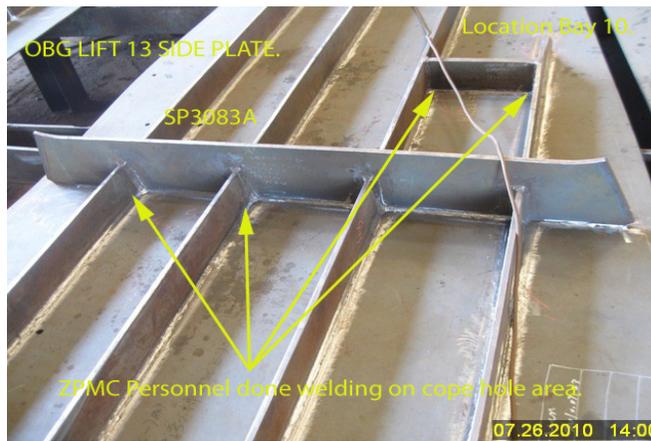
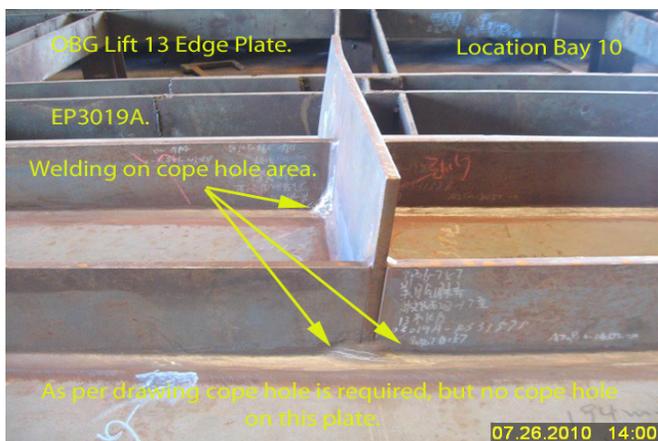
BAY 10:

During the Caltrans Quality Assurance in-process observations of the fabrication of edge panels and side panels in tower bay 10, this Quality Assurance Inspector (QA) discovered the following issue: ZPMC personnel have welded over cope hole and snipe areas on various lift 13 edge and side panels. The effected edge panels are identified as EP3018C, EP3025A and EP3026A. The effected side panels are identified as SP3081, SP3115A, SP3113A, SP3109A, SP3078A and SP3110A. According to the approved shop drawings, cope hole and/or snipes are required in the areas where the panel stiffeners intersect the panel diaphragms. All above mentioned panels are located in tower Bay#10. For further information, please see the attached pictures below. This QA inspector generated incident report on this date.

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

WELDING INSPECTION REPORT

(Continued Page 4 of 5)



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.

WELDING INSPECTION REPORT

(Continued Page 5 of 5)

Inspected By:	Gaikwad,Shailesh	Quality Assurance Inspector
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Reviewed By:	Clifford,William	QA Reviewer
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