

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-016715**Date Inspected:** 21-Aug-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:** Zhu Zhong Hai**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Manoj Prabhune 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:

This QA Inspector randomly observed the following work in progress:

**OBG # TRIAL ASSEMBLY YARD****Segment # 9DW**

This QA Inspector performed Dimension Inspection along with Caltrans QA Inspector Mr. Raghavendra Reddy for the Vertical Offset at T-Ribs to T-Ribs at Side Panel dimension was recorded from following work point for Segment 9DW between Panel Point (PP) 80 to PP 80.5; PP 81 to PP 81.5 and PP 81.5 to PP 82. Details of these locations can be found on CT / QA document titled "OBG DCP Hand Measurement Survey: WT Stiffener Offset". This QA recorded the measurements and submitted the information to CT / QA lead inspector for review.

**Bay #1**

This QA received ZPMC inspection notification sheet 06447 to perform dimensional inspection of traveler rails identified as 20TR2-017. Dimensional inspections performed on each of these traveler rails include, but is not limited to, overall length, Thickness at Typical Section, Flange width at typical section, Web to flange offset, Depth Typical Section, Flange Curl at typical Section. The results of the inspection were recorded on Caltrans

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(CT) QA form OBG DCP Hand Measurements Survey: Traveler Rails and submitted to CT QA lead for review.

### Segment # 9DE

This QA Inspector performed Individual Inspection against the Punch List , Incident Report 1444 Dated 07-07-10 raised against Flatness Survey for Bottom Panel Cross Beam side Segment 9DE between Panel Point 82 to PP83 at E4 location As per the Incident Report it was been observed that Distortion is at the segment support area. Piece mark of affected member is identified as BP181A, earlier was deformed by 20mm when measured by 630 Straight edges, acceptable range is 5mm as per AASHTO 11.4.13.2

This QA Inspector performed Inspection and Confirmed 3mm only after rectification that ZPMC has fixed the issue.

### Segment # 9AW ~ 9BW

This QA inspector was performed inspection along with Caltrans (CT) QA Mr. Manunath Math, American Bridge Fluor (ABF) ABF Survey Team for the Skin Flatness between Segments 9AW to 9BW between Panel Point (PP) 73 to 74.

Counter Weight side at B1 and B2 area W3 location and Cross Beam side at B3 and B4 area W4 Locations at weld connecting Bottom Panel to Side Panel with 5000mm String line for overall deformation and 600mm and 630 mm Straight Edge for localized deformation and Counter Weight side at T1 area W2 location and South Cross Beam side T2 area W5 Location at weld connecting Deck Panel to Edge Panel with 5000mm String line for overall deformation and 600mm and 630 mm Straight Edge for localized deformation.

### Segment # 10AW ~ 10BW

This QA inspector observed, ZPMC qualified welding personnel identified as 067571 perform Shielded Metal Arc Welding (SMAW), weld joint identified as OBW10B-001; ZPMC QC is identified as Mr. Zhou Peng. The welding parameters measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2214-B-U2-FCM-1. See the attached below Photo.

### Segment # 10AW ~ 10BW

This QA inspector observed, ZPMC qualified welding personnel identified as 067752 perform Shielded Metal Arc Welding (SMAW), weld joint identified as OBW10B-003; ZPMC QC is identified as Mr. Zhou Peng. The welding parameters measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-P-2214-B-U2-FCM-1

### Segment # 9CW

#### Repair Welding

This QA inspector observed, ZPMC qualified welding personnel identified as 041713 perform Shielded Metal Arc Welding (SMAW), weld joint identified as SEG053B-006; The Welding Repair Report (WRR) was B-WR14566. ZPMC CWI is identified as Mr.Zhu Zhong Hai. The welding parameters measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-SMAW-4G (4F) FCM-Repair-1. See the attached below photo.

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Unless otherwise noted, all work observed on this date appeared to generally comply with 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 Eric Tsang phone: 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhune,Manoj

Quality Assurance Inspector

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**Reviewed By:** Patterson,Rodney

QA Reviewer