

**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-021311**Date Inspected:** 26-Feb-2011**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:** Zho 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****WELDING:****Segment 12BW~ 12CW**

This QA Inspector observed ZPMC qualified welding personnel identified as 046709 perform Shielded Metal Arc Welding (SMAW), weld joint identified as OBW12C-001; located On Orthotropic Box Girder (OBG) Bottom Plate to Bottom Plate CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhou Peng. The Critical Welding Repair Report (CWRR) was B-CWR2821. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. ZPMC Quality Control (QC) Mr. Zhou Peng was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-345-SMAW-1G (1F) FCM-Repair-1. See attached photo for further details.

**Segment 12BW~12CW**

This QA Inspector observed ZPMC qualified welding personnel identified as 046709 perform Shielded Metal Arc

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Welding (SMAW), weld joint identified as BP3022-001-037; located On Orthotropic Box Girder (OBG) Side Plate to Edge Plate CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhou Peng. This QA Inspector observed the base material appears to have been preheated by a torch prior to welding. ZPMC Quality Control (QC) Mr. Zhou Peng was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-B-P-2213-B-U2-FCM-1.

### Segment 12BE~ 12CE

This QA Inspector observed ZPMC qualified welding personnel identified as 067752 perform Shielded Metal Arc Welding (SMAW), weld joint identified as OBE12E-002; located On Orthotropic Box Girder (OBG) Bottom Plate to Bottom Plate CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Wang Zhu. The Critical Welding Repair Report (CWRR) was B-CWR2805. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. ZPMC Quality Control (QC) Mr. Wang Zhu was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-345-SMAW-4G (4F) FCM-Repair-1.

### Segment 12BW

This QA Inspector observed ZPMC qualified welding personnel identified as 067993 perform Shielded Metal Arc Welding (SMAW), weld joint identified as DP3056-001-020; located On Orthotropic Box Girder (OBG) Deck Panel Diaphragm to Stiffener Plate CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhou Peng. The Welding Repair Report (WRR) was B-WR20076. This QA Inspector observed the base material appears to have been preheated by a torch prior to welding. ZPMC Quality Control (QC) Mr. Zhou Peng was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-345-SMAW-3G (3F) FCM-Repair-1.

### Cross Beam 17

This QA Inspector observed ZPMC qualified welding personnel identified as 067752 perform Shielded Metal Arc Welding (SMAW), weld joint identified as CB3001-017-006; located On Orthotropic Box Girder (OBG) Side Plate to Bottom Plate CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Li Yang. This QA Inspector observed the base material appears to have been preheated by a torch prior to welding. ZPMC Quality Control (QC) Mr. Li Yang was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-B-P-2212-TC-U4b-FCM-1.

### Segment 12BW~ 12CW

During a random visual inspection of Side plate 12BW~ 12CW, this Caltrans Quality Assurance Inspector observed the following issue:

- The distortion caused by welding measured approximately 7mm on the Side plate of 12CW.
- The Weld is identified as SEG3006-011
- The Side Plate is identified as: SP3043A
- The Bottom Plate is identified as: BP3027A
- The distortion was measured using a 630 straight edge.
- SP3043A is located on the Cross Beam Side of the segment
- This QA inspector observed ZPMC performing the cutting operation of weld joint SEG3006-011 (Side Plate to Bottom Plate). This QA inspector reviewed the Welding Repair Report (WRR) B-WR 19624 prior to cutting apart weld joint SEG3006-011 to correct the distortion on the side plate. See attached photos for further details.

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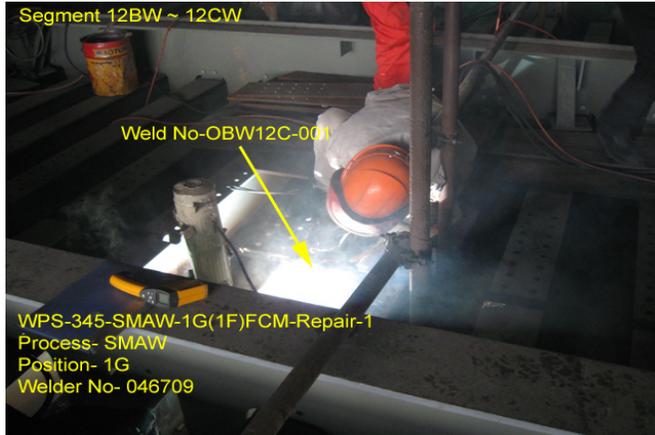
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Unless otherwise noted, all work observed on this date appeared to generally comply with the applicable contract documents.



### Summary of Conversations:

No significant conversations were reported on this date.

### 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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<b>Inspected By:</b>	Prabhune,Manoj	Quality Assurance Inspector
<b>Reviewed By:</b>	Peterson,Art	QA Reviewer

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