

**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-021577**Date Inspected:** 02-Feb-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**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:** 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:

This QA Inspector observed the following work in progress:

**BAY 10:**

Repair welding, FCAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040434, Perform Flux Core Arc Welding (FCAW) on OBG Traveler rail joint. Joint identified as 20TR2-030-015. ZPMC QC Identified as Xu Jie with temporary welding repair report WRR-B-WR20216. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-1G (1F) ESAB-Repair.

**Bay 14, WELDING:**

Segment 14W FCAW Process,

This QA Inspector observed ZPMC qualified welding personnel identified as 067888 perform Flux Core Arc Welding (FCAW), weld joint identified as DP3171-001-077; located On Orthotropic Box Girder (OBG) Deck Plate to Deck Panel diaphragm PJP Weld; ABF Quality Assurance (QA) is identified as Mr. Shen Jian Yuan. This QA Inspector observed a welding current of approximately 240 amps and 26 volts and the base material

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appears to have been being preheated by an electrical heating elements prior to welding. ABF Quality Assurance (QA) Mr. Shao Jian Yuan was onsite monitoring the welding variables. The welding variables recorded by QA appeared to comply with applicable WPS-B-T-2233-ESAB. For more information see attached picture.

This QA Inspector observed ZPMC qualified welding personnel identified as 066239 perform Flux Core Arc Welding (FCAW), weld joint identified as DP3171-001-142; located On Orthotropic Box Girder (OBG) Deck Plate to Deck Panel diaphragm PJP Weld; ABF Quality Assurance (QA) is identified as Mr. Shen Jian Yuan. This QA Inspector observed a welding current of approximately 270 amps and 25.2 volts and the base material appears to have been being preheated by an electrical heating elements prior to welding. ABF Quality Assurance (QA) Mr. Shao Jian Yuan was onsite monitoring the welding variables. The welding variables recorded by QA appeared to comply with applicable WPS-B-T-2232-ESAB.

This QA Inspector observed ZPMC qualified welding personnel identified as 067765 perform Flux Core Arc Welding (FCAW), weld joint identified as SEG3020F-073; located On Orthotropic Box Girder (OBG) FB3337A to LD3050A CJP Weld; ABF Quality Assurance (QA) is identified as Mr. Shen Jian Yuan. This QA Inspector observed a welding current of approximately 282 amps and 23.6 volts and the base material appears to have been being preheated by an electrical heating elements prior to welding. ABF Quality Assurance (QA) Mr. Wang Jiang Hua was onsite monitoring the welding variables. The welding variables recorded by QA appeared to comply with applicable WPS-B-T-2231-ESAB.

### SMAW Process:

This QA Inspector observed ZPMC qualified welding personnel identified as 067707 perform Shielded Metal Arc Welding (SMAW), weld joint identified as DP3174-001-035; located On Orthotropic Box Girder (OBG) Deck Panel to Stiffener PJP Weld; ABF Quality Assurance (QA) Mr. Shao Jian Yuan was onsite monitoring the welding variables. The welding variables recorded by QA appeared to comply with applicable WPS-B-P-2212-TC-U4b-FCM.1.

This QA Inspector observed ZPMC qualified welding personnel identified as 066038 perform Shielded Metal Arc Welding (SMAW), weld joint identified as SEG3020E-052; located On Orthotropic Box Girder (OBG) Bottom Plate to floor Beam CJP Weld; The Critical Welding Repair Report (CWRR) was B-WR2734 This QA Inspector observed a welding current of approximately 236 amps and 24.8 volts and the base material appears to have been being preheated by an electrical heating elements prior to welding. ABF Quality Assurance (QA) Mr. Wang Jiang Hua was onsite monitoring the welding variables. The welding variables recorded by QA appeared to comply with applicable WPS-345-SMAW-2G (2F) FCM-Repair-1.

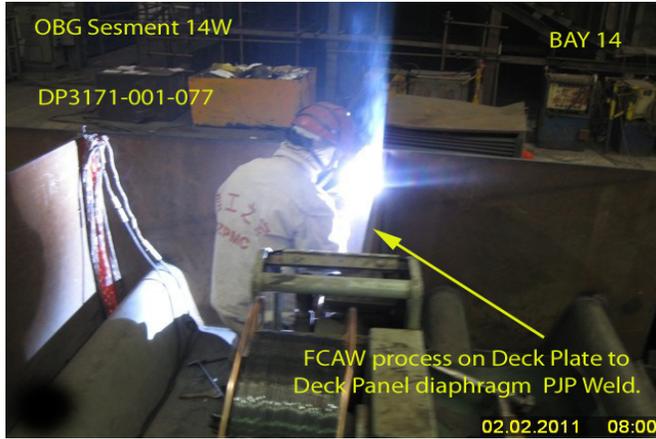
Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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## 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: 150002048250, 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

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