

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024085**Date Inspected:** 21-May-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:** 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****WELDING:****Segment 13CW**

This QA Inspector observed ZPMC qualified welding personnel identified as 037998 perform Shielded Metal Arc Welding (SMAW), weld joint identified as SEG3013S-131 ; located On Orthotropic Box Girder (OBG) X4301G to EB3030A CJP Weld; ZPMC Quality Control (QC) is identified as Mr. An Qinxiang. 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. An Qinxiang was onsite monitoring the welding variables. The welding variables recorded by QC appeared to comply with applicable WPS-B-P-2113-FCM-1. See attached photo for further details.

**Segment 13AW**

This QA Inspector observed ZPMC qualified welding personnel identified as 067947 perform Shielded Metal Arc

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## WELDING INSPECTION REPORT

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Welding (SMAW), weld joint identified as SEG3013A- ; located On Orthotropic Box Girder (OBG) Floor Beam to Longitudinal Diaphragm CJP Weld; ZPMC Quality Control (QC) is identified as Mr. An Qinxiang. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. The Welding Critical Repair Report (CWRR) was B-CWR2957. ZPMC Quality Control (QC) Mr. An Qinxiang 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. See attached photo for further details.

### Segment 13BW

This QA Inspector observed ZPMC qualified welding personnel identified as 040614 perform Flux Cored Arc Welding (FCAW), weld joint identified as SEG3014B-145 ; located On Orthotropic Box Girder (OBG) VP3012A to X4498C CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. The Welding Critical Repair Report (WRR) was B-WR20902. ZPMC Quality Control (QC) Mr. Zhang Lin 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.

### Segment 13BW

This QA Inspector observed ZPMC qualified welding personnel identified as 057220 perform Shielded Metal Arc Welding (SMAW), weld joint identified as DP3133-001-030 ; located On Orthotropic Box Girder (OBG) Deck Plate to Longitudinal diaphragm CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. The Welding Critical Repair Report (WRR) was B-WR21033. ZPMC Quality Control (QC) Mr. Zhang Lin 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 13BW

This QA Inspector observed ZPMC qualified welding personnel identified as 066687 perform Shielded Metal Arc Welding (SMAW), weld joint identified as DP3135-001-030 ; located On Orthotropic Box Girder (OBG) Deck Plate to Longitudinal diaphragm CJP Weld; ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. This QA Inspector observed the base material appears to have been preheated by an electrical heating element prior to welding. The Welding Critical Repair Report (WRR) was B-WR21033. ZPMC Quality Control (QC) Mr. Zhang Lin 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.

### HEAT STRAIGHTENING:

This QA Inspector observed the following work in progress:

ZPMC personnel heat straightening Orthotropic Box Girder (OBG) member identified as Segment 13AE Deck Plate to Deck Plate (DP3075A + DP3076). Distortion appeared to be caused by Welding. ZPMC Quality Control (QC) inspector identified as Mr. Zhu Zhong Hai was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report HSR (B) 10349.

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

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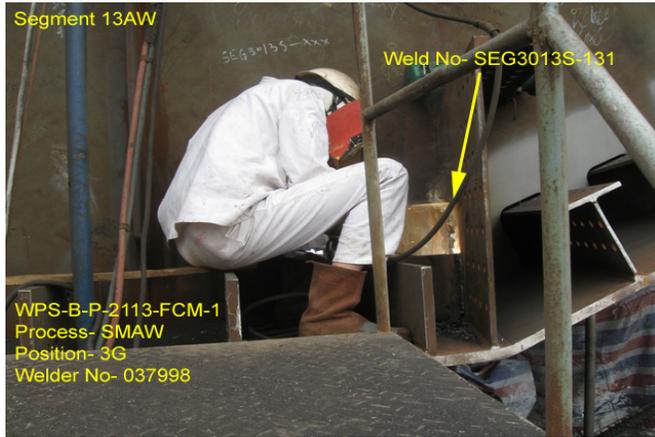
# WELDING INSPECTION REPORT

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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 James Devey - 15000026784, 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:** Peterson,Art

QA Reviewer