

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-015572**Date Inspected:** 11-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

<b>CWI Name:</b>	Mr. Huang min		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

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The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06170.

## Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Traveler Rail bracket weld Components. Total number of welds UT Tested: 10 No's. The weld designations are review as follows:

1. 20TR2-004-009,011,013,015,017.
2. 20TR2-016-009,011,013,015,017.

## Magnetic Particle Testing (MT)

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This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. MT performed on weld repaired area. This QA generated MT report for this date. The members are identified as OBG Traveler Rail weld Components. Total number of welds MT Tested: 02 No's. The weld designations are review as follows:

1. 20TR2-004-013.
2. 20TR2-016-011.

This QA received ZPMC inspection notification sheet 06174 to perform dimensional inspection of traveler rail identified as 10TR2-012. Dimensional inspections performed on this traveler rail include, but is not limited to, overall length, beam sweep, beam camber, flange tilt and flange warpage. The results of the inspection were recorded on Caltrans (CT) QA form OBG DCP Hand Measurements survey: Traveler Rails and submitted to CT QA lead for review.

Signed off the following green tag:

1. 13326.

This QA Inspector Randomly observed the following work in progress:

ZPMC personnel heat straightening OBG member identified as 11TR3-019. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Shen Jian Guo was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) HSR1 (B) 8077.

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ZPMC personnel heat straightening OBG member identified as DP3097A. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Huang min was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) HSR1 (B) 8761.

Flux Cored Arc Welding (FCAW) of weld joint BP3063-001-031,032. Welder is identified as 217185. ZPMC Quality Control (QC) is identified as Mr. Xia Yong Zheng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2133.

During random in process inspection of OBG member identified as DP3108A this QA observed an arc strike on Piece Mark (PCM) identified as RS3205B. This QA marked the affected area and informed ZPMC Quality Control (QC) indentified as Mr. Xia Yong Zheng of this issue. Mr. Xia Yong Zheng informed this QA that the arc strike would be corrected in a manner compliant with the contract documents. Refer the attached photos for reference.

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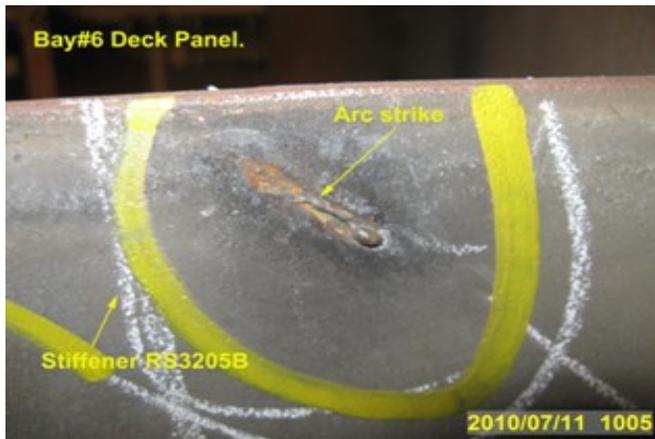
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FCAW of weld joint DP3126-001-012,013. Welder is identified as 053609. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-4132.

FCAW of weld joint EP3020-001-039,040. Welder is identified as 048625. ZPMC Quality Control (QC) is identified as Mr. Cui jun jie. The welding variables appeared to comply with the Applicable WPS: WPS-B-T-2132-3.

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 Quality Control (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 156000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Prabhu,Surendra	Quality Assurance Inspector
<b>Reviewed By:</b>	Hall,Steven	QA Reviewer

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