

**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-019062**Date Inspected:** 02-Jan-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

<b>CWI Name:</b>	Mr. Liu fa wen		
<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. 08015 and 08019.

**Magnetic Particle Testing (MT)**

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG bike path weld Components. Total number of welds MT Tested: 19 No's. The weld designations are review as follows:

1. BK4ASD1-057-026,025,019,020,015,016,017,007~013.
2. BK004A8-059-023,024,035
3. BK004A2-064-016,018

This QA Inspector Randomly observed the following work in progress:

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Flux Cored Arc Welding (FCAW) welding of weld joint identified as BK004A3-063-021,022. Welder is identified as 054459. ZPMC Quality Control (QC) is identified as Mr. Liu chuan gang. The welding variables appeared to comply with the Applicable WPS: B-T-2132-ESAB.

FCAW welding of weld joint identified as BK004A3-063-056,057. Welder is identified as 500405. ZPMC Quality Control (QC) is identified as Mr. Liu chuan gang. The welding variables appeared to comply with the Applicable WPS: B-T-2132-ESAB.

FCAW welding of weld joint identified as BK004A4-063-004,005. Welder is identified as 054459. ZPMC Quality Control (QC) is identified as Mr. Liu chuan gang. The welding variables appeared to comply with the Applicable WPS: B-T-2132-ESAB.

Shielded Metal Arc Welding (SMAW) Repair welding of weld joint identified as BK004A1-062-043. Welders are identified as 069894. ZPMC Quality Control (QC) is identified as Mr. Liu chuan gang. The welding variables appeared to comply with the Applicable WPS: WPS-345-SMAW-2G (2F)-Repair. The repair welding was being performed as per the Caltrans approved Critical Welding Repair Report (CWR) No: B-CWR2481. This weld was rejected by ZPMC QC personnel and recorded on UT report B787-UT-17775.

### BAY- 3

FCAW buttering welding of traveler rail member is identified as 20TR2-032. Welder is identified as 208035. ZPMC Quality Control (QC) is identified as Mr. Zhang yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-1G-ESAB-Repair. The repair welding was being performed as per the Caltrans Engineer approved Critical Welding Repair Report (CWR) No: B-CWR1568. Refer the attached photos for reference.

SMAW welding of weld joint identified as SP3079-001-067,068. Welder is identified as 058087. ZPMC Quality Control (QC) is identified as Mr. Zhang yaxu. The welding variables appeared to comply with the Applicable WPS: B-P-2213-B-U2.

ZPMC personnel heat straightening OBG member identified as 20TR2-042. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Zhang yaxu was present to monitor the heat straightening process. The heat straightening appeared to comply with the Caltrans Engineer approved Heat Straightening Report (HSR) HSR (B)-362 Rev.1.

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

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## 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 15000422372, 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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