

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015271**Date Inspected:** 27-Jun-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**CWI Name:** Mr. Tian Lei**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:**

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:

**BAY- 1**

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) buttering welding of Traveler Rail 21TR2-002. Welder is identified as 216575. ZPMC Quality Control (QC) is identified as Mr. Ai Wei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The buttering was performed as per the Critical Welding Report (CWR) No: B-CWR1568.

ZPMC Personnel performing Heat Straightening for the Traveler Rail (TR) 20TR1-030. Heat straightening was being performed appeared to comply with the Caltrans Engineer approved Applicable HSR Report# HSR (B)-363 Rev.No:1. ZPMC Quality Control (QC) is identified as Mr. Ai Wei.

**BAY- 2**

FCAW of weld joint FB3192-001-005. Welder is identified as 062438. ZPMC Quality Control (QC) is identified

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as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T-2132-3.

FCAW of weld joint FB3178-001-070/071. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T-2132-3.

FCAW of weld joint FB3188-001-031. Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T-2233-TC-U4b-F.

BAY- 3

FCAW of weld joint FB3111-001-029/030. Welder is identified as 208035. ZPMC Quality Control (QC) is identified as Mr. Zhan Hai Feng. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

FCAW of weld joint FB3108-001-136. Welder is identified as 055564. ZPMC Quality Control (QC) is identified as Mr. Zhang Yaxu. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T- T-2132-3.

FCAW of weld joint FB3108-001-137. Welder is identified as 044824. ZPMC Quality Control (QC) is identified as Mr. Zhang Yaxu. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T- T-2132-3.

FCAW of weld joint FB3121-001-020. Welder is identified as 052696. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:  
WPS-B-T-2231-TC-U4b-F.

During Quality Assurance (QA) random in-process observations of the fabrication of OBG floor beam subassemblies this Caltrans (CT) QA Inspector observed ZPMC has created a weld joint that is not detailed on the approved shop drawings, without the Engineers approval. ZPMC has added approximately 300mm to the end of stiffener plate identified as X3630B. The floor beam subassembly is identified as FB3138.

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report.

During the Caltrans Quality Assurance in-process observations of the fabrication of Floor beam FB3126A, this QA Inspector observed ZPMC personnel heat straightening Seismic Performance Critical Material (SPCM) material distorted by welding without the Engineers approval. The plate is identified as X3380B (SPCM).The deviation from flat as measured by this QA was 10mm per 1000mm.The Material thickness is 20 mm.

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report and attached photos.

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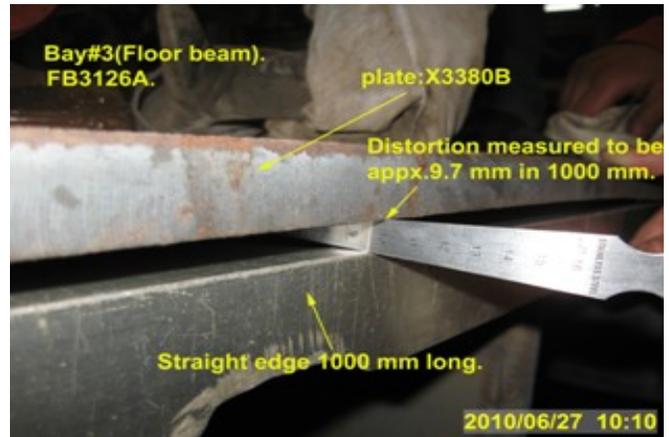
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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## 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 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhu, Surendra

Quality Assurance Inspector

**Reviewed By:** Hall, Steven

QA Reviewer

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