

**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-017313**Date Inspected:** 11-Oct-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. Chen xi**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) / Tower**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) of weld joint 9TR2-002-017. Welder is identified as 216872. ZPMC Quality Control (QC) is identified as Mr. Xiang feng feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2331-B-U2-F.

FCAW of weld joint 9TR1-002-017. Welder is identified as 216575. ZPMC Quality Control (QC) is identified as Mr. Xiang feng feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2331-B-U2-F.

**BAY- 2**

FCAW of weld joint FB3319-001-066,067. Welder is identified as 045227. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

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FCAW of weld joint E5-SB1-002-001~012. Welder is identified as 045203. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

FCAW Repair welding of weld joint LD3051-001-002. Welder is identified as 045276. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR15792. This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT- UT-17033.

BAY- 3

FCAW Repair welding of weld joint FB3272-001-017. Welder is identified as 050242. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-2G (2F)-FCM-Repair. The repair welding was being performed as per the Caltrans Engineer approved Critical Welding Repair Report (CWR) No: B-CWR2020. This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT- UT-15599.

FCAW of weld joint FB3266-001-084,085. Welder is identified as 217805. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

During Quality Assurance random in-process observations of the fabrication of OBG lift 14, East Floor beam FB3286A, this QA observed ZPMC Welding personnel performed base metal repair (BMR) on the sleeve plate without the Engineers approval. Total of 7 areas repaired. The welding was performed using Shielded Metal Arc Welding (SMAW) in the Horizontal (2G) position. The sleeve plate is identified as SA8004. The Y locations are approximately 410 mm, 1375 mm, 1810 mm, 3750 mm, 4630 mm, 5120 mm and 7180 mm from the toe of the weld identified as SA8004-001-001 (measured clock wise and looking from top of the sleeve).

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

BAY- 4

Submerged Arc Welding (SAW) of weld joint SA3358-001-001. Welder is identified as 207288. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

BAY- 10

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06921.

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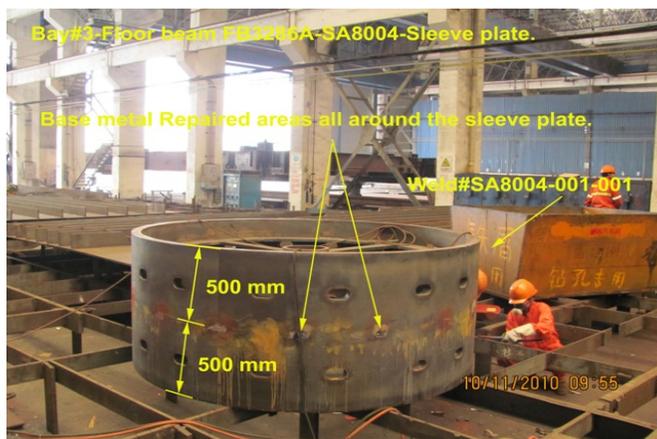
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## Magnetic Particle Testing (MT)

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 Tower Façade weld Component. Total number of welds MT Tested: 01 No. The weld designations are review as follows:

### 1. SD1-SA3-7-8.

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 / Michel Ng 1592845703, who represents the Office of Structural Materials for your project.

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