

**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-018386**Date Inspected:** 25-Nov-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)**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- 3

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07486.

## 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 Floor beam weld Components. Total number of welds UT Tested: 2 No's. The weld designations are review as follows:

1. FB3272-001-012.
2. SEG3019K-212.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07494.

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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 OBG Floor beam weld Components. Total number of welds MT Tested: 13 No's. The weld designations are review as follows:

1. SEG3019K-144,145, 097,098,055,056,085, 086,091,092,049,050
2. SEG3019L-086.

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint SA8009-001-002. Welder is identified as 044830. ZPMC Quality Control (QC) is identified as Mr. Zhang yaxu. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2231-B-U2-F.

FCAW of weld joint FB3286-001-160. Welder is identified as 055564. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2333-TC-P4-F.

FCAW of weld joint FB3286-001-149. Welder is identified as 052696. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2333-TC-P4-F.

### BAY- 2

FCAW of weld joint FB3343-001-337. Welder is identified as 066236. ZPMC Quality Control (QC) is identified as Mr. Yuan hai gang. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2232-TC-U4c-F.

During Caltrans QA in process observations of the fabrication of FB3343A , this QA observed ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager / McQuaid).ZPMC Welding personnel did not applied the post heat after completion of welding to maintain the temperature in the area of the weld at 165 C - 225°C. The weld is identified as FB3343-001-337.The welding process used was Flux Cored Arc Welding. The area was being preheated using electric strip heaters. The weld is a Complete Joint Penetration with steel backing joining FB web plate (X4954A) to Stiffener plate (X4949N).The weld is not Seismic Performance Critical Material. The FB web base material thickness is 50 mm and stiffener plate is 45 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.

This QA Inspector performed photo documentation on Lift 14 Hinge plates are identified as FB3286A, FB3273A, FB3272A, FB3328B, FB3327A,FB3343A,SA3325A,SA3324A,SA3409A and SA3410A located in sub assembly bay 2 and 3.These photos has been sent to QA lead Inspector and Structural Material Representative (SMR) by mail.

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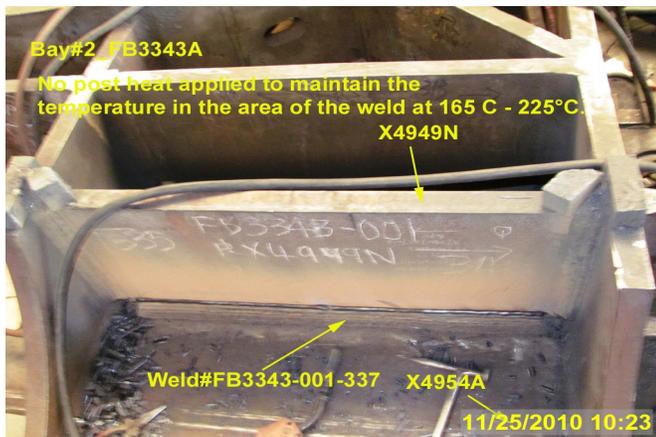
# WELDING INSPECTION REPORT

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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