

**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-015359**Date Inspected:** 28-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 / 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- 1

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06076.

## 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 weld Components. Total number of welds UT Tested: 50 No's. The weld designations are review as follows:

1. 20TR1-026-001,003,005,007.
2. 20TR1-030-001,003,005,007.
3. 20TR1-027-001,003,005,007.
4. 20TR1-036-001,003,005,007.
5. 21TR1-002-001,003,005,007.

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6. 21TR4-003-001,003,005,007.

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Traveler Rail (TR)-21TR4-003, this QA Inspector observed One (1) Class “A” indication measuring approximately 15 mm in length. The Indication rating is +7dB. The depth of the indication is 18 mm. The weld joint is identified as 21TR4-003-005. The weld is a Complete Joint Penetration (CJP) with reinforcement fillet weld joining TR web to flange. The thickness of the web is 20 mm.

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

This QA Inspector Randomly observed the following work in progress:

ZPMC Personnel performing Heat Straightening for the Traveler Rail (TR) 21TR3-003. 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

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 06073.

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 Traveler Rail weld Components. Total number of welds MT Tested: 04 No's. The weld designations are review as follows:

1. 20TR1-007-001,003,005,007.

FCAW of weld joint FB3178-001-131. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U4b-F.

FCAW of weld joint FB3193-001-177. Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Zhu Jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2232-TC-U5-F-2.

BAY- 3

FCAW of weld joint FB3138-001-037/038. Welder is identified as 206386. 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.

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FCAW of weld joint FB3108-001-155. Welder is identified as 217805. 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 FB3145-001-011. Welder is identified as 044790. 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- T-2133.

ZPMC QC UT Technicians are performing Ultrasonic Testing for the Floor beam weld joint numbers are identified as FB3137-001-003 and 010. Refer the attached photos for reference.

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

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