

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014068**Date Inspected:** 26-Apr-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:

This QA Inspector Randomly observed the following work in progress:

**BAY-1**

Flux Cored Arc Welding (FCAW) welding of weld joint 20TR2-022-017. Welder is identified as 215397. ZPMC Quality Control (QC) is identified as Mr. Ai Wei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-F.

**BAY-2**

Submerged Arc Welding (SAW) welding of weld joint FB3192-001-002. Welder is identified as 045265. 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-2221-B-U3c-S-2.

FCAW welding of weld joint FB3229-001-011. Welder is identified as 062438. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS:

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WPS-B-T-2132-3.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 005605.

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 member is identified as OBG FB weld Components. Total number of welds UT Tested: 10 No's. The weld designations are review as follows:

1. FB3217-001-001.
2. FB3201-001-011,110,111.
3. FB3176-001-002,005,006.
4. FB3177-001-001,110,111.

During the Quality Assurance Ultrasonic Testing (UT) review of weld located on Floorbeam-FB3201-001, this QA Inspector observed One (1) Class "A" Longitudinal indication measuring approximately 10 mm in length at 14.3 mm depth. The indication is located on weld joint identified as FB3201-001-011. This weld is designated as Non Seismic Performance Critical Material (Non SPCM). The weld is a Complete Joint Penetration (CJP) Butt weld joining plate (X4224A) Non SPCM to plate (X4225A) Non SPCM. The thickness of the FB plate is 20 mm.

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

BAY-3

SAW welding of weld joint FB3107-001-055. Welder is identified as 044780. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-U3c-S-2.

SAW welding of weld joint FB3114-001-005. Welder is identified as 050502. ZPMC Quality Control (QC) is identified as Mr. Shi Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-U3c-S-2.

BAY-5

FCAW welding of Repair weld joint 11TR3-015-005. Welder is identified as 204342. ZPMC Quality Control (QC) is identified as Mr. Shen jian gao. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-2G (2F)-Repair-1. The Repair welding was been performed against the Welding Repair Report (WRR) No: B-WR10363 Rev No: 0 and ZPMC Ultrasonic Testing (UT) Report No: B787-UT-10921.

BAY-8

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FCAW welding of weld joint BK004A3-056-027. Welder is identified as 210341. ZPMC Quality Control (QC) is identified as Mr. Liu Chuan gung. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 005602.

## 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 member is identified as OBG BK weld Components. Total number of welds UT Tested: 01 No. The weld designations are review as follows:

1. BK004A1-054-009.

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 15000422371, 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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