

**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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019079**Date Inspected:** 26-Dec-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) Chanxing Island**Location:** Shanghai, China

<b>CWI Name:</b>	Mr. Geng Wei		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Ultrasonic Testing (UT) – NWIT Document No: 007930

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Segment 13AE. The weld designations reviewed are as follows:

1. DP3107-001-024, 042, 058, 076, 094, 110, 128
2. DP3106B-001-016, 024, 042, 058, 094, 110, 136

Description of Incident: During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on OBG Segment 13AE Deck Panel, this Quality Assurance Inspector (QA) discovered that two (2) Class "B" indication measuring approximately 25mm in length. The Indication rating is +11dB and length approximately 25mm. The nominal thickness of the plate is 14mm and depth of the indication approximately 10mm. The indication is located on the weld joint identified as DP3106B-001-120 and 128. The weld is a Complete Joint Penetration (CJP) T joint joining deck panel diaphragm to deck panel. The ZPMC QC is identified as Mr. Geng Wei. The indication is clearly marked by QA on/near the weld. This weld is designated as Seismic Performance Critical Member (SPCM). OBG Segment 13AE is located in east side of fabrication bay 14. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

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During QA and QC conversation that ZPMC not yet completed UT repair welding on those weld joints. So QA requested to ZPMC that to perform welding repair with WRR and cross check with UT.

Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3019BB-015 located on Sub Assembly Component to Bottom Plate of the OBG Segment 14E. ZPMC Welder is identified as 070007. ZPMC Quality Control (QC) is identified as Mr. Zhong Guo Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3019BB-037 located on Sub Assembly Component to Bottom Plate of the OBG Segment 14E. ZPMC Welder is identified as 070432. ZPMC Quality Control (QC) is identified as Mr. Zhong Guo Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3019BB-059 located on Sub Assembly Component to Bottom Plate of the OBG Segment 14E. ZPMC Welder is identified as 037997. ZPMC Quality Control (QC) is identified as Mr. Zhong Guo Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3019BB-081 located on Sub Assembly Component to Bottom Plate of the OBG Segment 14E. ZPMC Welder is identified as 037998. ZPMC Quality Control (QC) is identified as Mr. Zhong Guo Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3019BB-103 located on Sub Assembly Component to Bottom Plate of the OBG Segment 14E. ZPMC Welder is identified as 058102. ZPMC Quality Control (QC) is identified as Mr. Zhong Guo Hui. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-P-2212-Tc-U4b-FCM-1.

Flux Core Arc Welding (FCAW) welding of weld joint SEG3020X-013 and 014 located on of the OBG Segment 14W. ZPMC Welder is identified as 025276. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2232-ESAB.

FCAW welding of weld joint SEG3020B-054 located on of the OBG Segment 14W. ZPMC Welder is identified as 068917. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2133-ESAB.

FCAW welding of weld joint SEG3020Z-024 located on of the OBG Segment 14W. ZPMC Welder is identified as 068917. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2134-ESAB.

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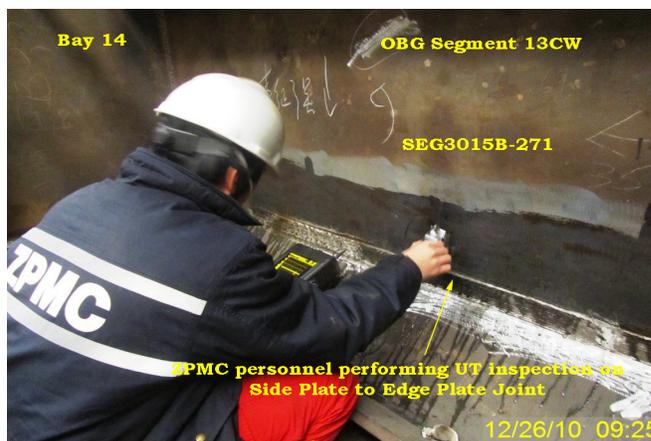
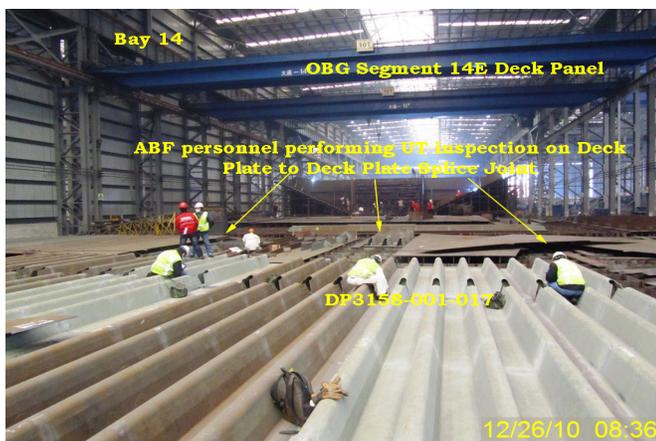
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FCAW welding of weld joint SEG3020K-013 and 014 located on of the OBG Segment 14W. ZPMC Welder is identified as 066421. ZPMC Quality Control (QC) is identified as Mr. Wang Xiang Pin. The welding variables recorded by QC appeared to comply with the Applicable WPS- B-T-2233-ESAB.

This QA inspector observed ABF personnel performed Ultrasonic Testing on deck plate to deck plate splice joint of the OBG Segment 14E and the welds are identified as DP3158-001-017, DP3158-001-021 and DP3167-001-030. See the attached picture.

This QA inspector observed ZPMC personnel performed Ultrasonic Testing on side plate to vertical plate joint of the OBG Segment 13CW and the weld is identified as SEG3015B-271. See the attached picture.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and 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 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Kumar,Vibin	Quality Assurance Inspector
<b>Reviewed By:</b>	Patel,Hiranch	QA Reviewer

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