DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-022606
Date Inspected: 02-Apr-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Mr. An Qing Xing

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ 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: 008713

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 13B/CW. The weld designations reviewed are as follows:

1. SEG3014J-062, 067, 072, 077, 082, 087, 092, 097
2. SEG3014J-102, 107, 112, 117, 122, 127, 132, 137, 142
3. SEG3014J-101, 106, 111, 116, 121, 126, 131, 136, 141
4. SEG3014J-061, 066, 071, 076, 081, 086, 091, 096
5. SEG3014J-063, 068, 073, 078, 083, 088, 093, 098
6. SEG3014J-103, 108, 113, 118, 123, 128, 133, 138, 143

Description of Incident: During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on OBG Segment 13BW, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Class “A” indication measuring approximately 20mm in length.
- The Indication rating is +6dB and length approximately 20mm.

- The nominal thickness of the plate is 22mm and depth of the indication approximately 13mm.
- The indication is located on the weld joint identified as SEG3014J-086.
- The “Y” location for this indication is approximately 30mm from top of stiffener.
- The weld is a Complete Joint Penetration (CJP) ‘T’ joint joining Bottom Plate I-Stiffener to Floor Beam.
- The indication is clearly marked by QA on/near the weld.
- This weld is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 13BW is located in Bay 14 West Side.
- The Notice of Witness Inspection Number (NWIT) is 008713
- The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.
- As per the contract documents, ZPMC’s QC personnel are required to perform 100% UT inspection of this weld.

Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3020AQ-025 located on Anchor Plate to Side Plate at panel point 125 to 127 of OBG Segment 14W. ZPMC Welders are identified as 066443 and 066002. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2211-Tc-U5b-FCM.

SMAW welding of weld joint SEG3020BB-020 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welder is identified as 045246. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020BB-056 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welders are identified as 037932 and 067765. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020BB-074 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welders are identified as 069841 and 066261. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020AV-011 located on SA3416 to Floor Beam at panel point 128.3 of OBG Segment 14W. ZPMC Welder is identified as 066443. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2211-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020D-018 located on SA to Floor Beam of OBG Segment 14W. ZPMC Welder is identified as 069896. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2114- FCM-1.

SMAW repair welding of weld joint SEG3014B-204 located on Bottom Plate to I-rib stiffener at panel point 122 of OBG Segment 13BW. ZPMC Welder is identified as 067588. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair, which is used as per Critical Repair Report (CWR) B-CRR-2905.

SMAW repair welding of weld joint SEG3014G-009 located on Deck Panel Diaphragm to Deck Panel Diaphragm of OBG Segment 13BW. ZPMC Welder is identified as 066179. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20537.

SMAW repair welding of weld joint SEG3015L-009 and 012 located on Deck Panel Diaphragm to Deck Panel Diaphragm of OBG Segment 13CW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair, which is used as per Welding Repair Report (WRR) B-WRR-20538.

Flux Core Arc Welding (FCAW) welding of weld joint SA3124-001-005 and 007 located on Side plate to Side Plate of OBG Segment 13BW. ZPMC Welder is identified as 201583. ZPMC Quality Control (QC) is identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-223(2)1T-ESAB.

This QA inspector observed ABF personnel performed Magnetic particle Testing (MT) on Deck Panel to Deck Panel splice weld, after rood and hot pass FCAW welding of OBG Segment 13BW. The weld number is identified as SEG3014-001.

This QA inspector observed ABF personnel performed Magnetic particle Testing (MT) on Bottom Plate RS stiffener at panel point 122 to 122.5 bike path side of OBG Segment 13BW. See the attached pictures.

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

Summary of Conversations:

WELDING INSPECTION REPORT

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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.

Inspected By:	Kumar,Vibin	Quality Assurance Inspector
Reviewed By:	Patel,Hiranch	QA Reviewer