

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-022604**Date Inspected:** 04-Apr-2011**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**CWI Name:** Mr. An Qing Xing**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:** 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: 008725

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 13CW. The weld designations reviewed are as follows:

1. SEG3015C-061, 065, 069, 073, 077, 081, 085, 089, 093
2. SEG3015C-097, 101, 105, 109, 113, 117, 121, 125
3. SEG3015C-062, 066, 070, 074, 078, 082, 086, 090, 094
4. SEG3015C-098, 102, 106, 110, 114, 118, 122, 126

Ultrasonic Testing (UT) – NWIT Document No: 008734

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 Component. The weld designations reviewed are as follows:

1. SA6031-002-081, 082, 088, 089

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

- One (1) Class “A” indication measuring approximately 20mm in length.
- The Indication rating is +7dB and length approximately 20mm.
- The nominal thickness of the plate is 20mm and depth of the indication approximately 11mm.
- The indication is located on the weld joint identified as SEG3015C-069.
- The “Y” location for this indication is approximately 80mm from top of stiffener.
- The weld is a Complete Joint Penetration (CJP) ‘T’ joint joining Bottom Plate I-Stiffener to Floor Beam at panel point 124.5 Cross Beam Side.
- The indication is clearly marked by QA on/near the weld.
- This weld is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 13CW is located in Bay 14 West Side.
- The Notice of Witness Inspection Number (NWIT) is 008725
- 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. See the attached picture.

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

- One (1) Class “A” indication measuring approximately 25mm in length.
- The Indication rating is +8dB and length approximately 25mm.
- The nominal thickness of the plate is 20mm and depth of the indication approximately 18mm.
- The indication is located on the weld joint identified as SEG3015C-094.
- The “Y” location for this indication is approximately 50mm from top of stiffener.
- The weld is a Complete Joint Penetration (CJP) ‘T’ joint joining Side 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 13CW is located in Bay 14 West Side.
- The Notice of Witness Inspection Number (NWIT) is 008725
- 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 SEG3020BB-002 located on Vertical Shear Plate to Anchor Plate of OBG Segment 14W. ZPMC Welders are identified as 037932 and 067765. ZPMC Quality Control

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(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 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 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 welding of weld joint SEG3020AG-009 located on Edge Plate to Side Plate of OBG Segment 14W. ZPMC Welder is identified as 037779. 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-2212-Tc-U4b-FCM-1.

Flux Core Arc Welding (FCAW) welding of weld joint SEG3020AV-006 located on SA3416 to Floor Beam at panel point 128.3 of OBG Segment 14W. ZPMC Welder is identified as 066239. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2231-ESAB.

SMAW welding of weld joint DP3127A-001-030 and 023 located on Deck Panel I-rib to I-rib 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-B-T-3213-B-U3b.

SMAW repair welding of weld joint DP3133-00-022 located on Deck Panel Longitudinal Diaphragm to Deck Panel Diaphragm of OBG Segment 13BW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Liu Fang. 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-20666.

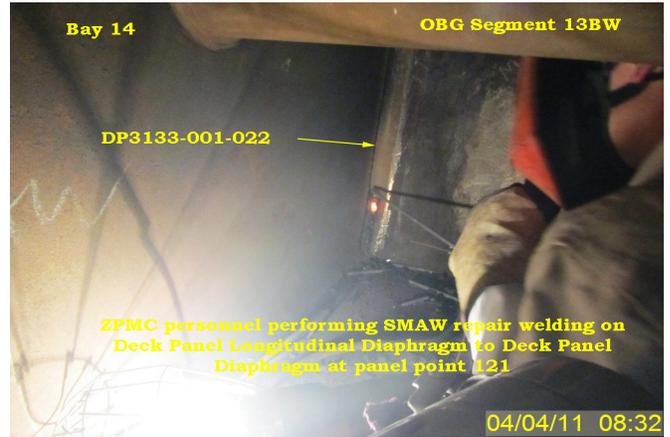
SMAW repair welding of weld joint SEG3014M-001 located on Corner Assembly to Side Plate of OBG Segment 13BW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Liu Fang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-4G-(4F)-FCM-Repair, which is used as per Critical Welding Repair (CWR) B-CWR-2914.

SMAW repair welding of weld joint SEG3015A-014 located on Corner Assembly to Side Plate of OBG Segment 13CW. ZPMC Welder is identified as 066179. ZPMC Quality Control (QC) is identified as Mr. Liu Fang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-4G-(4F)-FCM-Repair, which is used as per Critical Welding Repair (CWR) B-CWR-2915.

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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.

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