

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019500**Date Inspected:** 20-Jan-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. Qui Wen**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: 008236

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. SEG3007AT-017

Magnetic Particle Testing (MT) – NWIT Document No's: 008237

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Segment 13AW. The weld designations reviewed are as follows:

1. SEG3013AU-088, 092, 086, 087, 090, 091
2. SEG3014-133, 134, 137, 138, 204, 2105, 208, 209
3. SEG3013AV-091, 087, 088, 089, 092, 093

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Bay 14

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) repair welding of weld joint SEG3020BB-073 located on Vertical Shear Plate to Bottom Plate of OBG Segment 14W. ZPMC Welder is identified as 067949. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-2G (2F) – FCM – ESAB- Repair-1, which is used as per Critical Welding Repair (CWR) B-CWR-2752.

FCAW repair welding of weld joint SEG3020BB-046 located on Vertical Shear Plate to Bottom Plate of OBG Segment 14W. ZPMC Welder is identified as 066695. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-2G (2F) – FCM – ESAB- Repair-1, which is used as per Critical Welding Repair (CWR) B-CWR-2752.

Shielded Metal Arc Welding (SMAW) repair welding of weld joint SEG3020X-011 located on Floor Beam to Longitudinal Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G (3F) – FCM – Repair-1, which is used as per Critical Welding Repair (CWR) B-CWR-2659

SMAW repair welding of weld joint SEG3020X-013 located on Floor Beam to Longitudinal Diaphragm of OBG Segment 14W. ZPMC Welder is identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G (3F) – FCM – Repair-1, which is used as per Critical Welding Repair (CWR) B-CWR-2662

FCAW welding of weld joint SEG3020AG-010 located on Floor Beam to Edge Plate of OBG Segment 14W. ZPMC Welder is identified as 201215. 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-2233-ESAB.

SMAW welding of weld joint SEG3015L-010, 011 and SEG3015J-010, 011 located on Floor Beam to Deck Panel Diaphragm of the OBG Segment 13CW. ZPMC Welders are identified as 067993 and 037932. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2312-Tc-P4-FCM.

FCAW welding of weld joint SEG3015H-002, 003 and SEG3015K-002, 003 located on Floor Beam to Deck Panel Diaphragm of the OBG Segment 13CW. ZPMC Welders are identified as 067275 and 066734. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2232-ESAB.

SMAW welding of weld joint DP3135-001-022 and 023 located on Deck Panel Diaphragm to Deck Panel Diaphragm of the OBG Segment 13CW. ZPMC Welders are identified as 045204 and 037840. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

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Sub Merged Arc Welding (SAW) welding of weld joint OBG13A-001-006 located on deck panels OBG Segment 13BW to OBG Segment 13CW. ZPMC Welder is identified as 250050. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2221-B-L2c-S-2.

Description of Incident: During the Quality Assurance random visual inspection of welds located on OBG Segment 13AE at panel point 119.5, this Quality Assurance Inspector (QA) observed that RS stiffener cope hole size is too larger as per the shop drawing. The QA measured approximately 100mm radial distance, but the shop drawing mention 75mm radial distance. This weld is a Complete Joint Penetration (CJP) weld and T joint joining the Bottom Plate to Longitudinal Diaphragm. The Bottom Plate to Longitudinal Diaphragm weld is identified as SPCM. This weld is designated as Seismic Performance Critical Member (SPCM). The weld is identified as SEG3007AT-017. The OBG segment 13AE is located East Side of Bay 14 area. The ZPMC QC is identified as Mr. Geng Wei. QA inform to ZPMC QC that prior to the repair welding, to prepare WWR and ensure the cope hole are comply with as per shop drawing. See the attaché 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.

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