

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019424**Date Inspected:** 22-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), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**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**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 13CE (NWIT # 08262)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3011U-002

BAY 14, OBG 13AW (NWIT # 08264)

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3013AP-131, 137, 044, 143, 149, 155, 129, 135, 043, 141, 147, 153

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BAY 14, OBG FB3343 (NWIT # 08259)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

FB3343-001-012

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 14W:

Repair welding of weld joint no: SEG3020Q-058 [Longitudinal Diaphragm (LD) 3049A to Floor beam (FB) 3320A, complete joint penetration (CJP) weld at panel point (PP) 126]. The welder is identified as 066398 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2620 Rev-2.

Repair welding of weld joint no: SEG3020BB-010 [Vertical Shear Plate, Sub Assembly (SA) SA3444A to Bottom Plate (BP) 3088A, complete joint penetration (CJP) weld]. The welder is identified as 066038 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-0.

Repair welding of weld joint no: SEG3020BB-037 [Vertical Shear Plate, Sub Assembly (SA) SA3447A to Bottom Plate (BP) 3089A, complete joint penetration (CJP) weld]. The welder is identified as 067949 and was observed welding in the 2G position. Welding process was identified as Flux Cored Arc Welding (FCAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-FCAW-2G(2F)-ESAB-REPAIR-FCM. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-0.

Repair welding of weld joint no: SEG3020BB-019 [Vertical Shear Plate, Sub Assembly (SA) SA3445A to Bottom Plate (BP) 3089A, complete joint penetration (CJP) weld]. The welder is identified as 066236 and was observed welding in the 2G position. Welding process was identified as Flux Cored Arc Welding (FCAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-FCAW-2G(2F)-ESAB-REPAIR-FCM. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-0.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020AG-004 [Floor Beam (FB) 3317A to Edge Plate (EP) 3030A, CJP weld at panel point (PP) 125]. The welder is identified as 066695 and was observed

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welding in the 3G position. ZPMC CWI was identified as Mr. An Qing Xiang. The welding variables recorded by QC appeared to comply with WPS: B-T-2233-ESAB.

During random in process inspection this QA inspector observed that ZPMC personnel were performing installation/fit up of Anchorage Plate (AP) 3017, 3018, 3019 of segment 14 west at Panel Point (PP) 125 through 127. Attached photograph provide additional details.

During random in process inspection this QA inspector observed burn through on the repair excavation area of weld joint SEG3020X-012 joining LD 3049A to BP 3090A near PP 125.5. This issue has been discussed with ZPMC CWI Mr. An Qing Xiang and CT lead QA. Mr. An Qing Xiang informed this QA that this issue would be corrected in manner that compliant with contract documents. Attached photograph provide additional detail.

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 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 : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Gaikwad,Umesh

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer