

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019531**Date Inspected:** 26-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:** Qiu 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**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 14E (NWIT # 08291)

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.

SEG3019AB-123

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

Bay 14

OBG Seg 14W:

Repair welding of weld joint no: SEG3020E-056 [Bottom Plate (BP) 3093A to Floor beam (FB) 3343A, complete joint penetration (CJP) weld at panel point (PP) 128.3]. The welder is identified as 066398 and was observed

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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 2734 Rev-1.

Repair welding of weld joint no: SEG3020D-052 [Bottom Plate (BP) 3092A to Floor beam (FB) 3343A, complete joint penetration (CJP) weld at panel point (PP) 128.3]. 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 2734 Rev-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-041 [Floor Beam (FB) 3336A to stiffener of Side Plate (SP) 3133A, CJP weld at panel point (PP) 128]. The welder is identified as 067609 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2213-Tc-U4b-FCM-1.

Repair welding of weld joint no: SEG3020BB-001 [Vertical Shear Plate, Sub Assembly (SA) SA3442A to Bottom Plate (BP) 3087A, complete joint penetration (CJP) weld]. The welder is identified as 067942 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 Welding Repair Report (WRR): B-WR 20146 Rev-0.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-033 [Floor Beam (FB) 3336A to stiffener of Side Plate (SP) 3133A, CJP weld at panel point (PP) 128]. The welder is identified as 067609 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2213-Tc-U4b-FCM-1.

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 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 Welding Repair Report (WRR): B-WR 20146 Rev-0.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020W-186 [Stiffener of Floor Beam (FB) 3317A to Longitudinal Diaphragm (LD) 3048A, CJP weld at panel point (PP) 125]. The welder is identified as 066236 and was observed welding in the 1G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-222(3)1T-ESAB-1.

During random in process inspection this QA inspector observed that ZPMC personnel performed tack welding without removal of paint from the contact surface. The parts are identified as joining Sub Assembly (SA) 3415B, SA3415C and SA3414C to Edge Plate (EP) 3030B in between Panel Point (PP) 125~125.5. The welder is

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identified as 066674. This issue has been discussed with AB/F QA Mr. Kim and CT lead QA. Mr. Kim informed this QA that this issue would be solved in manner compliant with contract documents. Later on this QA observed that ZPMC removed those tack welds, ground out weld and remove the paint properly and installed the part again. Attached photograph provide additional detail.

OBG Seg 13BW

The Submerged Arc Welding (SAW) process on weld joint no: SEG3014-009 [Deck Panel (DP) 3130A to Corner Assembly (CA) 3015A]. The welder is identified as 250050 and was observed welding in the 1G position. ZPMC QC was identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS: B-T-222(3)1T-ESAB-1.

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