

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-022856**Date Inspected:** 19-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), 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 Self-Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

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

Bay 14

OBG Seg 14W:

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AF-003 [Deck Plate PL3491B of Deck Panel (DP) 3183A to Edge Panel (EP) 3030E, Complete Joint Penetration (CJP) weld at Panel Point (PP) 127 to PP128]. The welders are identified as 066261 and 037748 and were observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

Repair welding of weld joint no: SEG3020BB-065 [Top Anchorage Plate (AP) 3016A to Vertical Shear Plate Sub Assembly (SA) 3450A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125 to PP126]. The welder is identified as 045246 and was observed welding in the 4G position. Welding process was identified as SMAW. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply

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with WPS: 345-SMAW-4G(4F)-FCM-Repair-1. Repair welding was done as per Welding Repair Report (WRR): B-WR 20713 Rev-0.

The SMAW process on weld joint no: SEG3020AG-002 [Deck Plate PL3491A of Deck Panel (DP) 3183A to EP 3030B, CJP weld at Panel Point (PP) 125 to PP126]. The welders are identified as 067572 and 037932 and were observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020AG-002 [Deck Plate PL3491A of Deck Panel (DP) 3183A to EP 3030C, CJP weld at Panel Point (PP) 126 to PP127]. The welders are identified as 066361 and 069841 and were observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020R-016, 017 and 071 to 076 [Deck Plate PL3491A of DP 3183A to Floor Beam (FB) diaphragm X4859G, Fillet weld at PP126]. The welder is identified as 069896 and was observed welding in 4F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2114-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020*-005 [DP 3171A to DP 3172A, CJP weld]. The welder is identified as 045280 and was observed welding in 1G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-223(2)1T-ESAB-1.

The FCAW process on weld joint no: SEG3020V-034 [DP diaphragm X4813A of DP 3171A to top Anchorage Plate (AP) 3016A, CJP weld at PP125]. The welder is identified as 067275 and was observed welding in 2G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020E-010 [DP diaphragm X4856D of DP 3176A to block out bottom plate SA3416C, CJP weld at PP128.3]. The welder is identified as 201215 and was observed welding in 2G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The SMAW process on weld joint no: SEG3020K-004 [DP diaphragm X4858B of DP 3173A to Floor Beam (FB) sub assembly SA3410A, CJP weld at PP127.3]. The welder is identified as 067520 and was observed welding in 2G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2212-B-U2-FCM-1.

The FCAW process on weld joint no: SEG3020E-002 [DP diaphragm X4857B of DP 3173A to DP diaphragm X4856J of DP 3174A, CJP weld at PP128.3]. The welder is identified as 066239 and was observed welding in 3G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: DP3174-001-389 [DP diaphragm X4856J to DP diaphragm X4882D of DP 3174A, CJP weld at PP128.3]. The welder is identified as 067949 and was observed welding in 3G position.

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ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: DP3172-001-389 [DP diaphragm X4857D to DP diaphragm X4882H of DP 3172A, CJP weld at PP128.3]. The welder is identified as 066881 and was observed welding in 3G position. ZPMC QC was identified as Mr. An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The SMAW process on weld joint no: SEG3020J-027, 028 and 085 to 088 [EP3030D to FB 3335A, Fillet weld at PP127.5]. The welder is identified as 070007 and was observed welding in 4F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2114-FCM-1.

During random in process visual inspection this QA Inspector observed that AB/F NDT personnel were performing Magnetic Particle Testing (MT) after root/hot pass of weld joint SEG3020*-005 (joining DP3171 to DP 3172). Attached photograph provide additional details.

During random in process visual inspection this QA Inspector observed that deck panel DP3168A was installed by ZPMC personnel. Attached photograph provide additional details.

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

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Reviewed By: Peterson, Art

QA Reviewer