

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-022653**Date Inspected:** 11-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 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: SEG3020BB-011 [Top anchorage plate (AP) 3013A to Vertical Shear Plate sub-assembly SA3444A, CJP weld in between panel point PP125 to PP126]. The welders are identified as 037932 and 067765 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: SEG3020BB-047 [Top anchorage plate (AP) 3015A to Vertical Shear Plate sub-assembly SA3448A, CJP weld in between panel point PP125 to PP126]. The welders are identified as 069841 and 066261 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.

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The SMAW process on weld joint no: SEG3020E-015 [Floor Beam (FB) 3344A to block out bottom plate Sub Assembly SA3416C, CJP weld at PP128.3]. The welders are identified as 067942 and 045246 and were 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: SEG3020T-281 [Deck Panel diaphragm plate X4813D of DP 3177A to top anchorage plate (AP) 3022A, CJP weld at PP125.5]. The welder is identified as 045240 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020P-033 [Deck Panel diaphragm plate X4813D of DP 3177A to top anchorage plate AP3022A, CJP weld at PP126.5]. The welder is identified as 203871 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020R-013 [Deck Panel diaphragm plate X4814D of DP 3177A to top anchorage plate AP3022A, CJP weld at PP126]. The welder is identified as 062708 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020P-025 [Deck Panel diaphragm plate X4813F of DP 3176A to top anchorage plate AP3021A, CJP weld at PP126.5]. The welder is identified as 048433 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020K-004 [Deck Panel diaphragm plate X4858B of DP 3173A to floor beam sub assembly SA3410A, CJP weld at PP127.3]. The welder is identified as 066421 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020AA-001 [Deck Panel diaphragm plate X4882A of DP 3174A to Longitudinal Diaphragm (LD) 3048A, CJP weld in between PP127 to PP127.3]. The welder is identified as 067949 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020*-021 [DP 3184A to Edge Plate (EP) 3029A, CJP weld]. The welder is identified as 201583 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The FCAW process on weld joint no: SEG3020*-013 [DP 3168A to EP 3029A, CJP weld]. The welder is identified as 045143 and was observed welding in 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

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The SMAW process on weld joint no: SEG3020BB-003 [Top anchorage plate (AP) 3013A to Vertical Shear Plate extension X5057A, CJP weld at PP126]. The welder is identified as 066361 and was 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: SEG3020BB-012 [Top anchorage plate (AP) 3013A to Vertical Shear Plate extension X5058A, CJP weld at PP126]. The welder is identified as 066179 and was 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.

During random in process visual inspection this QA Inspector observed that ZPMC NDT personnel Mr. Tang Xing Shan was performing Ultrasonic Testing (UT) on the weld joints of vertical shear plate to top anchorage plate and found several numbers of non conforming UT indications. These indications are marked on the weld joints by ZPMC NDT personnel. Attached photograph provide additional details. The weld designations are identified as follows.

SEG3020BB-065; ZPMC found 03 no's of UT rejectable indications.

SEG3020BB-056; ZPMC found 03 no's of UT rejectable indications.

During random in process visual inspection this QA Inspector observed that the bottom plate BP3087A, BP3088A, Bp3089A and BP3090A is distorted due to welding near PP125. This issue has been discussed with ZPMC CWI Mr. An Qing Xiang and CT Lead QA Inspector. Mr. An Qing Xiang informed this QA that ZPMC will perform heat straightening with prior approval of engineer. 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

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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
