

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-022461**Date Inspected:** 21-Dec-2010**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:

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

Blast Shop 2, West Tower Lift 4

This QA inspector performed Visual Testing (VT) of pre blasting area of internal of West Tower lift 4 (from 131M top to 143M) with ZPMC and AB/F Quality Control (QC) personnel. Several nonconforming discontinuities (porosities, spatters, arc strikes and deep gouge) were present at various locations of internal skin surface of West Tower lift 4. These discontinuities are clearly marked and recorded on the data sheet. This QA inspector submitted related data of this inspection to the lead QA inspector.

Bay 14

OBG Seg 13AW:

Repair welding of weld joint no: SEG3013B-023 [Floor Beam (FB) 3201A to stiffener of bottom plate, complete joint penetration (CJP) weld at panel point (PP) 120]. The welder is identified as 066163 and was observed

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welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Liu Fang. The welding variables recorded by this QC appeared to comply with Welding Procedure Specification (WPS): 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 19124 Rev-0.

OBG Seg 13CW

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3015B-271 [Vertical Plate (VP) 3015 to Side Plate (SP) 3112, CJP weld; in between Panel Points (PP) 122.5 to 123]. The welder is identified as 066038 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhang Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

OBG Seg 14W

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-015 [Bottom Plate (BP) 3088A to Side Plate (SP) 3133A, CJP weld]. The welder is identified as 051348 and was observed welding in the 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-B-U2.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-016 [Bottom Plate (BP) 3089A to Side Plate (SP) 3134A, CJP weld]. The welder is identified as 045246 and was observed welding in the 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-B-U2.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020Q-058 [Floor Beam (FB) 3320A to Longitudinal Diaphragm (LD) 3049, CJP weld at panel point (PP) 126]. The welder is identified as 067876 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-T-2233-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020P-068 [Floor Beam (FB) 3349A to Longitudinal Diaphragm (LD) 3084A, Fillet weld at panel point (PP) 126.5]. The welder is identified as 067550 and was observed welding in the 3F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2133-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020D-052 [Floor Beam (FB) 3343A to Bottom Plate (BP) 3092A, CJP weld at panel point (PP) 128.3]. The welders are identified as 047866 & 202122 and were observed welding in the 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2232-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020V-095 [Floor Beam (FB) 3316A to Bottom Plate (BP) 3092A, Fillet weld at panel point (PP) 125]. The welder is identified as 066439 and was observed welding in the 2F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2132-ESAB.

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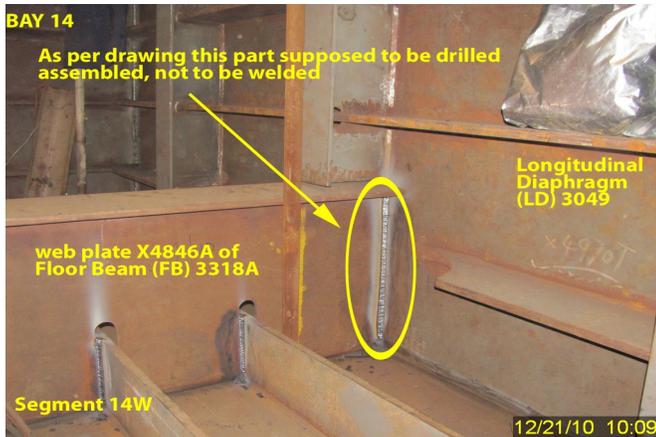
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The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020V-096 [Floor Beam (FB) 3316A to Bottom Plate (BP) 3092A, Fillet weld at panel point (PP) 125]. The welder is identified as 069469 and was observed welding in the 2F position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2132-ESAB.

During random in process inspection this QA inspector observed crack like indications on the temporary attachment removal area of base metal of Floor Beam (FB) 3343 hinge plate at Panel Point (PP) 128.3 of segment 14W. This issue has been discussed with ZPMC lead QC Mr. Li Ming Yang and CT lead QA. ZPMC lead QC Mr. Li Ming Yang informed this QA that ZPMC will perform repair as comply with contract documents. Attached photograph provide additional details.

During random in process inspection this QA inspector observed that ZPMC personnel performing the Flux Cored Arc Welding (FCAW) process for joining the part web plate X4846A of Floor Beam (FB) 3318A to Longitudinal Diaphragm (LD) 3049 at Panel Point (PP) 125.5. Welders are identified as 066734 and 069469. As per shop drawing SEG3020S and FB3318 these parts supposed to be drilled assembled not to be welded. This issue has been discussed with ZPMC CWI Mr. Qiu Wen and CT lead QA. Mr. Qiu Wen informed this QA that ZPMC will make related necessary documents and will inform to CT for further inspection. Attached photograph provide additional details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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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:	Patterson,Rodney	QA Reviewer
