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 #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-022474
Date Inspected: 06-Apr-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Shi Lei, Sun Tian Liang			**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-065 [Top anchorage plate (AP) 3016A to Vertical Shear Plate sub-assembly SA3450A, Complete Joint Penetration (CJP) weld in between panel point PP125 to PP126]. The welder is identified as 045246 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 Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020*-012 [Edge Plate (EP) 3029A to Deck Plate (DP) 3184A, CJP weld]. The welder is identified as 201583 and was observed welding in 2G position. ZPMC QC was identified as Mr. Shi Lei. The welding variables recorded by this QC appeared to comply with WPS: B-T-2232-ESAB.

The SMAW process on weld joint no: SEG3020BB-002 [Top anchorage plate (AP) 3013A to Vertical Shear Plate sub-assembly SA3442A, 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 Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-056 [Top anchorage plate (AP) 3015A to Vertical Shear Plate sub-assembly SA3449A, 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.

The FCAW process on weld joint no: SEG3020R-013 [Deck Panel diaphragm plate X4814D of Deck Panel (DP) 3177A to top Anchorage Plate (AP) 3022A, CJP weld at PP126]. The welder is identified as 069118 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 Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020BB-029 [Top anchorage plate (AP) 3014A to Vertical Shear Plate sub-assembly SA3446A, CJP weld in between panel point PP125 to PP126]. The welder is identified as 037748 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 FCAW process on weld joint no: SEG3020R-015 [Deck Panel diaphragm plate X4814D of DP 3177A to Floor Beam Diaphragm X4859G, CJP weld at PP126]. The welder is identified as 069118 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: SEG3020P-035 [Deck Panel diaphragm plate X4813D of DP 3177A to web plate sub assembly SA8529B, CJP weld at PP126.5]. The welder is identified as 067275 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: SEG3020W-015 [Deck Panel diaphragm plate X4812A of DP 3177A to web plate of FB3317A, CJP weld at PP125]. The welder is identified as 067949 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-T-2233-ESAB.

The FCAW process on weld joint no: SEG3020W-013 [Deck Panel diaphragm plate X4812A of DP 3177A to flange plate of FB3317A, CJP weld at PP125]. 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: SEG3020M-030 [Deck Panel diaphragm plate X4817A of DP 3177A to top anchorage plate AP3022A, CJP weld at PP127]. The welder is identified as 066881 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 SMAW process on weld joint no: SEG3020K-004 [Deck Panel diaphragm plate X4858B of DP 3173A to flange of floor beam sub assembly SA3410, CJP weld at PP127.3]. The welder is identified as 037779 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-P-2212-Tc-U4b-FCM-1.

The FCAW process on weld joint no: SEG3020H-011 [Deck Panel diaphragm plate X4857C of DP 3172A to flange of FB3332A, CJP weld at PP127.5]. The welder is identified as 066239 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.

During random in process visual inspection this QA Inspector observed that AB/F NDT personnel were performing Ultrasonic Testing (UT) on the splice weld of deck panels (DP3145A+DP3146A) identified as SEG3015-004 and deck panel (DP3143A) to corner assembly (CA3016A) weld joint is identified as SEG3015-007. During inspection several of non conforming UT indications were found and these indications are clearly marked on weld joint by AB/F NDT personnel. Attached photograph provide additional details.

During random in process visual inspection this QA Inspector observed that ZPMC personnel performing heat straightening on OBG member identified as DP3171A. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Sun Tian Liang was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) number HSR-10244. 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.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

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