

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-022661**Date Inspected:** 17-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:

Repair welding of weld joint no: SEG3020BB-011 [Top Anchorage Plate (AP) 3013A to Vertical Shear Plate Sub Assembly (SA) 3444A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125 to PP126]. The welder is identified as 066361 and was observed welding in the 4G 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-4G(4F)-FCM-Repair-1. Repair welding was done as per Welding Repair Report (WRR): B-WR 20713 Rev-0.

Repair welding of weld joint no: SEG3020BB-056 [Top Anchorage Plate (AP) 3015A to Vertical Shear Plate Sub Assembly (SA) 3449A, 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

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SMAW. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply 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: SEG3020B-029 [Block out bottom plate sub assembly SA3416A to Floor Beam (FB) 3345A, complete joint penetration (CJP) weld at PP 128.7]. The welders are identified as 069841 and 066261 and were observed welding in 4G position. ZPMC Quality Control (QC) was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020W-018 [Deck Plate PL3491A of Deck Panel (DP) 3183A to FB 3317A, CJP weld at PP125]. 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: SEG3020T-226 to 233 [Deck Plate PL3491A of DP 3183A to FB diaphragm SA8529A, Fillet weld at PP125.5]. 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 Submerged Arc Welding (SAW) process on weld joint no: SEG3020\*-008 [DP 3174A to DP 3175A, CJP weld]. The welder is identified as 045270 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 Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020S-054 [DP diaphragm X4814C of DP 3172A to DP diaphragm X4814B of DP 3173A, CJP weld at PP125.5]. 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 FCAW process on weld joint no: SEG3020T-318 [DP diaphragm X4814B of DP 3173A to DP diaphragm X4814A of DP 3174A, CJP weld at PP125.5]. The welder is identified as 067275 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: SEG3020L-031 [DP diaphragm X4817G of DP 3172A to DP diaphragm X4858B of DP 3173A, CJP weld at PP127]. The welder is identified as 067888 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: SEG3020N-013 [DP diaphragm X4815B of DP 3171A to DP diaphragm X4816G of DP 3172A, CJP weld at PP126.5]. 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.

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The FCAW process on weld joint no: SEG3020Q-048 [DP diaphragm X4815B of DP 3171A to DP diaphragm X4816C of DP 3172A, CJP weld at PP126]. The welder is identified as 066421 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: SEG3020N-011 [DP diaphragm X4815G of DP 3169A to DP diaphragm X4815D of DP 3170A, CJP weld at PP126.5]. The welder is identified as 067949 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.

During random in process visual inspection this QA Inspector observed the weld joints SEG3020E-119, 120 [joining Edge Panel (EP) 3030E to FB diaphragm X4912B] were cut at panel point PP128.3 without prior approval of engineer. This issue has been discussed with ZPMC CWI Mr. An Qing Xiang and CT Lead QA Inspector. ZPMC CWI Mr. An Qing Xiang informed this QA Inspector that ZPMC will prepare Welding Repair Report (WRR) for these weld joints. 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.

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<b>Inspected By:</b>	Gaikwad,Umesh	Quality Assurance Inspector
<b>Reviewed By:</b>	Peterson,Art	QA Reviewer

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