

**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-020659**Date Inspected:** 16-Feb-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:** Shi Zhi, 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:

Repair welding of weld joint no: SEG3020BB-064 [Bottom Plate (BP) 3090A to Vertical Shear Plate SA3450A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125~126]. The welder is identified as 045246 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). AB/F QA was identified as Mr. Xiao Jun Peng. The welding variables recorded by this QA appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2793 Rev-0.

Repair welding of weld joint no: SEG3020BB-019 [Bottom Plate (BP) 3088A to Vertical Shear Plate SA3445A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125~126]. The welder is identified as 047864 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding

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(SMAW). AB/F QA was identified as Mr. Xiao Jun Peng. The welding variables recorded by this QA appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-1.

Repair welding of weld joint no: SEG3020BB-073 [Bottom Plate (BP) 3090A to Vertical Shear Plate SA3451A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125~126]. The welder is identified as 067942 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). AB/F QA was identified as Mr. Xiao Jun Peng. The welding variables recorded by this QA appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-1. (Attached photograph provide additional details).

Repair welding of weld joint no: SEG3020BB-046 [Bottom Plate (BP) 3090A to Vertical Shear Plate SA3448A, Complete Joint Penetration (CJP) weld in between panel point (PP) 125~126]. The welder is identified as 066398 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). AB/F QA was identified as Mr. Xiao Jun Peng. The welding variables recorded by this QA appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair-1. Repair welding was done as per Critical Welding Repair (CWR) Report: B-CWR 2752 Rev-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020BB-114 (Anchor Plate (AP) 3032A to Vertical Shear Plate SA3448A, CJP weld at PP126). The welder is identified as 066695 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: SEG3020BB-116 (Anchor Plate (AP) 3032A to Vertical Shear Plate SA3450A, CJP weld at PP126). The welder is identified as 067949 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. (Attached photograph provide additional details).

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020BB-115 (Anchor Plate (AP) 3032A to Vertical Shear Plate SA3449A, CJP weld at PP126). The welder is identified as 066421 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: SEG3020BB-111 (Anchor Plate (AP) 3032A to Vertical Shear Plate SA3445A, CJP weld at PP126). 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 SMAW process on weld joint no: SEG3020U-588 (Anchor Plate (AP) 3032A to Bottom Plate (BP) 3088A/3089A/3090A, CJP weld at PP126). The welders are identified as 067707, 067904 and 067588 and were observed welding in the 2G position. AB/F QA was identified as Mr. Wang Jiang Hua. The welding variables recorded by QA appeared to comply with WPS: B-P-2212-Tc-U4b-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020BB-112 (Anchor Plate (AP) 3032A to

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Vertical Shear Plate SA3446A, CJP weld at PP126). The welder is identified as 066421 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: SEG3020BB-113 (Anchor Plate (AP) 3032A to Vertical Shear Plate SA3447A, CJP weld at PP126). The welder is identified as 066695 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.

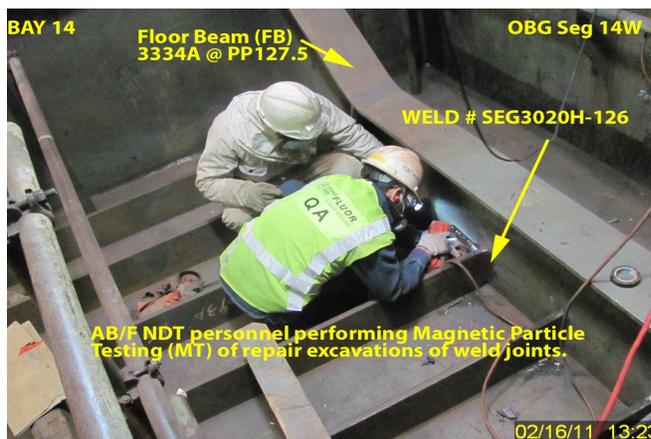
The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020U-587 (Anchor Plate (AP) 3032A to Longitudinal Diaphragm (LD) 3049A, CJP weld at PP126). The welder is identified as 067888 and was observed welding in the 3G position. AB/F QA was identified as Mr. Xiao Jun Peng. The welding variables recorded by QA appeared to comply with WPS: B-T-2233-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020D-063 (Stiffener on Floor Beam (FB) 3343A to Longitudinal Diaphragm (LD) 3051A, CJP weld at PP128.3). The welder is identified as 067764 and was observed welding in the 4G position. ZPMC CWI was identified as Mr. AN Qing Xiang. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1. (Attached photograph provide additional details).

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020D-067 (Stiffener on Floor Beam (FB) 3343A to Longitudinal Diaphragm (LD) 3051A, CJP weld at PP128.3). The welder is identified as 067764 and was observed welding in the 4G position. ZPMC CWI was identified as Mr. AN Qing Xiang. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

During random in process inspection this QA inspector observed that AB/F NDT personnel performing Magnetic Particle Testing of the excavated locations of weld joints rejected by ZPMC NDT personnel by Ultrasonic Testing (UT). The weld joints were identified as SEG3020H-126, 122, 130 joining I-rib stiffener on Bottom Plate (BP) 3093A to Floor Beam (FB) 3334A at Panel Point (PP) 127.5. 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.

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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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