

**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-019031**Date Inspected:** 26-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:** Lv Li Qing**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 Mr. Shrikant Utekar 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. The QA Inspector observed and/or found the following:

BAY # 14

**ULTRASONIC TESTING**

ZPMC NWIT No: 07930

This QA Inspector performed Ultrasonic Testing (MT) of approximately 10% of the length previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an (UT) report on this date. The members are identified as OBG 13AE deck panel. The weld designations are as follows:

DP3078-001-010, 013, 016, 019, 022, 025, 028

DP3080-001-253, 255, 254

DP3079-001-437

During the Ultrasonic testing of the weld DP3078-001-013 this Quality Assurance (QA) Inspector discovered a class "A" non conforming indication measuring approximately 10mm in length, Material thickness is approximately 18mm. The depth of the indications was approximately 9.2mm. The indication db rating was +8.

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The weld is Complete Joint Penetration (CJP) “T” Joint between deck panel and deck panel diaphragm. As per lead QA ZPMC will repair this weld without issuing incident report (IR). For indication detail see the “UT” report as same date.

This QA Inspector randomly observed the following work in progress.

### OBG 13EAST

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 068764 performing the Shielded Metal Arc Welding process on weld 034 located at PCMK SEG3007T. ZPMC QC Mr. Lv Li Qing was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2114-Fcm-1.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067079 performing the Flux Cored Arc Welding process on weld 359 located at PCMK SEG3007Y. ZPMC QC Mr. Zhong Yang Gang was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-1G (1F)-Fcm-Repair. Weld repair report identified as B-WR19262.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 037705 performing the Flux Cored Arc Welding process on weld 012 located at PCMK SEG3007AH. ZPMC QC Mr. Zhong Yang Gang was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-ESAB.

### OBG 14 EAST

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 217805 performing the Flux Cored Arc Welding process on weld 002 located at PCMK SEG3019A. ZPMC QC Mr. Zhong Guo Hui was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-ESAB.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066359 performing the Flux Cored Arc Welding process on weld 090 located at PCMK SEG3019L-1. ZPMC QC Mr. Zhong Guo Hui was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2233-ESAB.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 044830 performing the Flux Cored Arc Welding process on weld 053 located at PCMK SEG3019Q. ZPMC QC Mr. Zhong Guo Hui was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-T-2233-ESAB.

This QA Inspector observed ABF QA performing ultrasonic testing for the deck panel splice weld DP3158-001-017. This QA Inspector observed ABF QA found a class “A” rejectable indication.

During the random visual inspection of OBG 14 east this QA Inspector observed the root gap for the weld between LD3042 and FB3282 web (X4568C) was measured approximately 8mm. As per shop drawing this weld detailed as fillet weld. This QA Informed about this to ZPMC QC. As discussion with ZPMC QC the will change this weld fillet to complete joint penetration (CJP).

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 044772 performing the Shielded Metal Arc Welding process on weld 056 located at PCMK SEG3019Y. ZPMC QC Mr. Zhong Guo Hui was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2212-Fcm-1.

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This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066443 performing the Shielded Metal Arc Welding process on weld 029 located at PCMK SEG3019AA. ZPMC QC Mr. Zhong Guo Hui was monitoring this welding operation. The welding variables recorded by QC appeared to comply with WPS-B-P-2212-Fcm-1.

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



## Summary of Conversations:

No significant conversations were reported on this date.

## 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, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Utekar,Shrikant

Quality Assurance Inspector

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**Reviewed By:** Patterson,Rodney

QA Reviewer