

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-023801**Date Inspected:** 08-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 Components**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector, Anand Upadhye was present during the times noted above for observations relative to the work being performed.

NDT

BAY 14

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted notification number 08767.

Magnetic Particle Testing (MT).

This QA inspector performed MT of approximately 15 % of the area previously tested and accepted by ZPMC Quality control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

SEG3014P-041, 049, 050, 053, 055, 105, 106.

WELDING

This QA Inspector observed the following work in progress:

BAY 14

This QA Inspector observed ZPMC qualified welding personnel identified as 066881 perform welding by Flux

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Cored Arc Welding (FCAW), on Deck panel diaphragm to Anchor plate weld at panel point 125.5, of OBG Segment 14W. Weld joint is identified as SEG3020T-281. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2232-ESAB. This QA Inspector noted welding variables were 280~290 amperes and 25.2 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067949 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to Floor beam flange weld at panel point 125, of OBG Segment 14W. Weld joint is identified as SEG3020W-013. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2232-ESAB. This QA Inspector noted welding variables were 290~305 amperes and 25.1 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067520 perform welding by Shielded Metal Arc Welding (SMAW), on Deck panel diaphragm to Floor beam flange weld at panel point 127.3, of OBG Segment 14W. Weld joint is identified as SEG3020K-002. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2212-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 150~160 amperes and 24.4 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 069896 perform welding by Shielded Metal Arc Welding (SMAW), on Deck panel diaphragm to Floor beam flange weld at panel point 127.3, of OBG Segment 14W. Weld joint is identified as SEG3020K-004. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2212-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 145~160 amperes and 24.7 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066239 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to Deck panel diaphragm weld of OBG Segment 14W. Weld joint is identified as DP3173-001-322. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 245~260 amperes and 25 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066461 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel to longitudinal diaphragm weld between panel point 127.5 and 128, of OBG Segment 14W. Weld joint is identified as SEG3020AA-014. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2232-ESAB. This QA Inspector noted welding variables were 275~290 amperes and 25.3 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066261 perform welding by Shielded Metal Arc Welding (SMAW), on Vertical shear plate to Anchor plate weld of OBG Segment 14W. Weld joint is identified as SEG3020BB-038. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to

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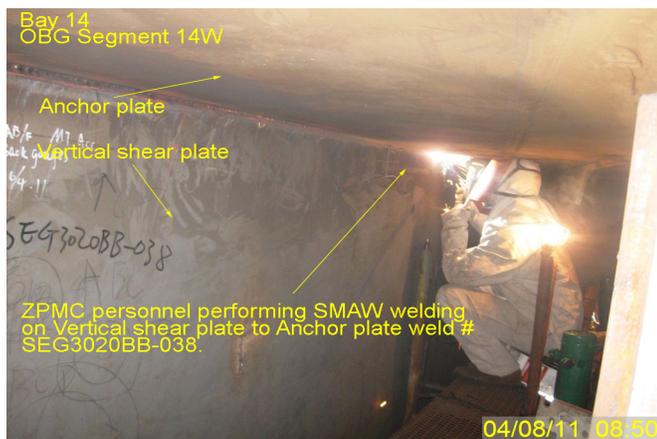
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monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 150~160 amperes and 24.8 volts, which appears to be in compliance with the approved WPS. See attached picture.

This QA Inspector observed ZPMC qualified welding personnel identified as 045196 perform repair welding by Shielded Metal Arc Welding (SMAW), on Deck panel diaphragm to Deck panel stiffener plate weld of OBG Segment 13BW. Weld joint is identified as DP3133-001-019, 022. ZPMC Quality Control (QC) Inspector identified as Liu Fang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-345-SMAW-3G (3F)-FCM-Repair-1 and Welding repair report B-WR20528. This QA Inspector noted welding variables were 140~155 amperes and 24.4 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ABF qualified NDT personnel perform Ultrasonic testing on Deck panel to Deck panel welds of OBG Segments 13 BW and 13 CW and Transverse splice weld joining OBG Segments 13BW and 13CW. Weld joints are identified as SEG3014-003, SEG3015-001 and OBW13A-016. Total of 5 locations, 5 locations and 17 locations were marked for weld repair on SEG3014-003, SEG3015-001 and OBW13A-016 respectively. See attached picture.

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, phone: 15000422372 , who represents the Office of Structural Materials for your project.

Inspected By: Upadhye, Anand

Quality Assurance Inspector

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Reviewed By: Clifford, William

QA Reviewer