

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-023828**Date Inspected:** 22-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

Outside Yard – OBG Trial Assembly

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted notification number 08891.

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:

CA3016-032, 033.

CA3016B-032, 033, 129, 130.

CA3016C-032, 033, 129, 130.

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This QA Inspector observed the following work in progress:

BAY 14

This QA Inspector observed ABF qualified NDT personnel perform Magnetic Particle Testing on Deck panel DP3177 to Deck panel DP3183 weld of OBG Segment 14W, after root pass welding by Flux Cored Arc Welding (FCAW) and prior to Submerged Arc Welding (SAW). Weld joint is identified as SEG3020-011. A total of 6 (Six) linear longitudinal indications were found on the weld joint. See attached picture.

This QA Inspector observed ABF qualified NDT personnel perform Ultrasonic Testing on Deck panel DP3184A to Edge plate EP3029A weld and Deck panel DP3168A to Edge plate EP3029A weld of OBG Segment 14W, between Panel point 125 and Panel point 127. Weld joints are identified as SEG3020-012 and SEG3020-021. A total of 39 Class A indications were found on the weld joints. See attached picture.

This QA Inspector observed ZPMC qualified welding personnel identified as 201215 perform welding by Flux Cored Arc Welding (FCAW), on U Rib Splice plate. Weld joint is identified as X3305K-010-001, 002. ABF Quality Control (QC) Inspector identified as Shao Jian Yuan was present to monitor the welding process. The welding variables recorded by ABF QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 230~240 amperes and 25.4 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 067275 perform welding by Flux Cored Arc Welding (FCAW), on U Rib Splice plate. Weld joint is identified as X3305K-001-001, 002. ABF Quality Control (QC) Inspector identified as Shao Jian Yuan was present to monitor the welding process. The welding variables recorded by ABF QC appeared to be in general compliance with WPS-B-T-2233-ESAB. This QA Inspector noted welding variables were 235~250 amperes and 24.3 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 045270 perform welding by Submerged Arc Welding (SAW), on Deck panel DP3177 to Deck panel DP3183 weld of OBG Segment 14W. Weld joint is identified as SEG3020-011. 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-223(2)1T-ESAB-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 066261 perform welding by Shielded Metal Arc Welding (SMAW), on Extension plate of Vertical shear plate to Top Anchor plate weld of OBG Segment 14W. Weld joint is identified as SEG3020BB-066. 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-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 145~160 amperes and 23.1 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 037748 perform welding by Shielded Metal Arc Welding (SMAW), on Extension plate of Vertical shear plate to Top Anchor plate weld of OBG Segment 14W. Weld joint is identified as SEG3020BB-012. 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

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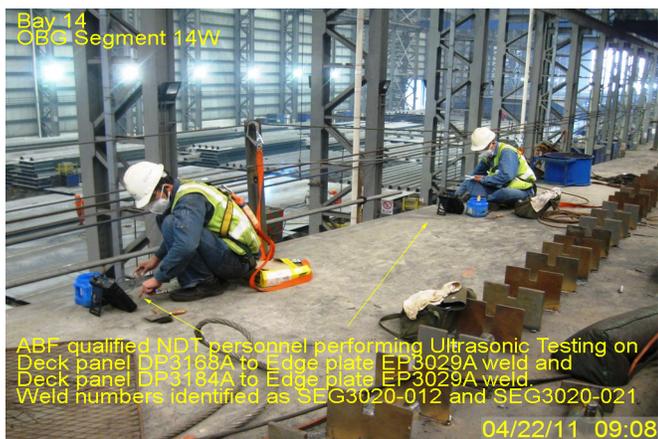
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in general compliance with WPS-B-P-2214-Tc-U4b-FCM-1. This QA Inspector noted welding variables were 145~160 amperes and 23.2 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 066421 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to Floor beam flange weld at panel point 127, of OBG Segment 14W. Weld joint is identified as SEG3020L-028. 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 290~305 amperes and 24 volts, which appears to be in compliance with the approved WPS.

This QA Inspector observed ZPMC qualified welding personnel identified as 045280 perform welding by Flux Cored Arc Welding (FCAW), on Deck panel diaphragm to Deck panel diaphragm weld at panel point 125, of OBG Segment 14W. Weld joint is identified as SEG3020W-009. 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 235~250 amperes and 24.9 volts, which appears to be in compliance with the approved WPS.

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

Reviewed By: Clifford, William

QA Reviewer
