

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-025110**Date Inspected:** 13-Jun-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**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 date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

OBG Trial Assembly Area

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

SMAW welding of holdback weld joints FB3271-001-010; CB3003A-019-016 located at the PCMK OBG 14E/CB19 longitudinal joint. Welder was identified as 049769. QC was identified as ABF CWI Wang Jun (QC1).

Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Xie Ming Feng (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2212-TC-U4b-FCM-1 as verbally identified by QCA1.

SMAW welding of weld joint OBE14G-002 located on PCMK OBG 14E. Welder was identified as 502946. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2114-FCM-1 as verbally identified by QCA1.

SMAW repair welding of weld joint SEG3019AJ-154 located on PCMK OBG 14E. Welder was identified as 216086. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-SMAW-1G(1F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-WR21217 as

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presented to this QA Inspector and verbally identified by QCA1.

SMAW welding of weld joints SEG3019G-059, 060 located on PCMK OBG 14E. Welder was identified as 068859. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2112-FCM-1 as verbally identified by QCA1.

SMAW repair welding of weld joint SEG3019BB-063 located on PCMK OBG 14E. Welder was identified as 066733. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-SMAW-1G(1F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-WR21256 as presented to this QA Inspector and verbally identified by QCA1.

FCAW layered repair welding of PL3439A, PL3440A, PL3441B, PL3467A, PL3467B located on PCMK OBG 14E at the 13CE/14AE transverse joint. Welder was identified as 050242. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-FCAW-1G(1F)-ESAB-repair as displayed on ZPMC Weld Repair Report B-WR21072 as presented to this QA Inspector and verbally identified by QCA1. See photo below of the welding operation in progress.

FCAW layered repair welding of PL3439A, PL3440A, PL3441B, PL3467A, PL3467B located on PCMK OBG 14E at the 13CE/14AE transverse joint. Welder was identified as 050242. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-FCAW-1G(1F)-ESAB-repair as displayed on ZPMC Weld Repair Report B-WR21072 as presented to this QA Inspector and verbally identified by QCA1. See photo below of the welding operation in progress.

SMAW layered repair welding of various deck plate I-ribs located on PCMK OBG 14W at the 13CW/14AW transverse joint, north (counterweight) side. Welder was identified as 066674. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-485-SMAW-3G(3F)-FCM-repair as displayed on ZPMC Weld Repair Report B-WR21258 as presented to this QA Inspector and verbally identified by QCA1.

This QA Inspector also performed the following in the OBG Trial Assembly Area:

Caltrans and ABF have agreed to conduct visual and magnetic particle (MT) inspections of welds as part of a special joint re-inspection program. In response to ZPMC NDT Inspection Notification Sheet (NWIT) #09487 for magnetic particle testing (MT) inspection of the following:

This QA Inspector performed random visual testing (VT) and then MT of approximately 15% of the area previously tested and accepted by ABF Quality Control personnel. This QA Inspector generated an MT report for this date and provided a turnover to dayshift personnel for tracking of these welds. The members were identified as follows:

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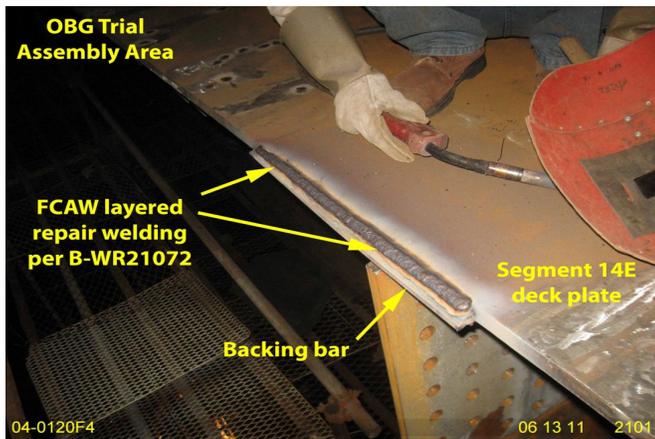
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OBG Segment 14W, SEG3020BC. The weld designations reviewed were: 047, 051, 053, 057, 059. No apparent indications were observed.

OBG Segment 14W, SEG3020BE. The weld designations reviewed were: 042, 046, 048, 052, 054, 058, 060. No apparent indications were observed in weld joints. However, weld numbers SEG3020BE-042, 046, 052 were visually unacceptable. Weld number SEG3020BE-042 was unacceptable due to the weld not being complete to the end of the weld joint. Weld numbers SEG3020BE-046, 052 were unacceptable due to profile and weld slag in the cope areas. MT was not performed on weld numbers SEG3020BE-042, 046, 052. See photo below of weld number SEG3020BE-042.

Weld joint SEG3020BC-048 was also listed on NWIT #09487, but was rejected by ABF inspectors. Weld joint SEG3020BC-048 was not reviewed by this QA Inspector.

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



Summary of Conversations:

As noted above.

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 James Devey 15000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet, George	Quality Assurance Inspector
Reviewed By:	Riley, Ken	QA Reviewer
