

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-022982**Date Inspected:** 19-Apr-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.

Bay 11

This QA Inspector randomly observed the following work in progress in the Bay 11:

SMAW repair welding of weld joint 30TR1-001-009 located on PCMK OBG traveler rail. Welders were identified as 044541, 202354. QC was identified as ZPMC CWI Shi Yu (QC1). Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Wang Quang Xin (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-345-SMAW-2G(2F)-repair as displayed on ZPMC Weld Repair Report B-WR20773 as presented to this QA Inspector and verbally identified by QCA1.

SMAW repair welding of weld joint 36TR1-001-009 located on PCMK OBG traveler rail. Welders were identified as 041713, 046704. 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-2G(2F)-repair as displayed on ZPMC Weld Repair Report B-WR20771 as presented to this QA Inspector and verbally identified by QC1.

OBG Trial Assembly Area

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

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Heat straightening of BK17-001-015, BK17B-001-015 located on PCMK OBG bike path cantilever beam. QC was identified as ZPMC CWI Li Yang (QC2). Heat treatment variables recorded by QC2 appeared to comply with ZPMC document HSR1(B)-10301 as presented to this QA Inspector and verbally identified by QC2.

Fit-up and SMAW tack welding of suspension bracket plates located on PCMK OBG suspension bracket as it was being fit to Segment 12BE, panel point 114. Welder was identified as 062812. QC was identified as ZPMC CWI Zhu Zhong Hai (QC3). Weld variables recorded by QC3 appeared to comply with WPS-B-P-2112 and WPS-B-P-2113 as verbally identified by QCA3. See photo below of the plates being fit-up and tacked. QC3 informed this QA Inspector that weld numbers could not be provided because the welding operation was in the fit-up stage of assembly and weld number would be provided when the plates were to be fully welded in the shop after the suspension bracket is removed from the OBG segment.

SMAW welding of weld joints CA3004-006 located on PCMK OBG Segment 12CE and SEG3007AB-094 located on PCMK OBG Segment 13AE, south (bikepath) side, deck plate to edge plate holdback welds. Welder was identified as 052493. QC was identified as QC3. Weld variables recorded by QC3 appeared to comply with WPS-B-P-2214-TC-U4b-FCM-1 as verbally identified by QC3.

SMAW welding of weld joints CA3010-005 located on PCMK OBG Segment 12CE and SEG3013AA-112 located on PCMK OBG Segment 13AE, north (crossbeam) side, deck plate to edge plate holdback welds. Welders were identified, respectively, as 067611, 066673. QC was identified as QC3. Weld variables recorded by QC3 appeared to comply with WPS-B-P-2214-TC-U4b-FCM-1 as verbally identified by QC3.

FCAW welding of weld joint EP3023-001-033 located inside PCMK OBG Segment 12AW. Welder was identified as 048696. QC was identified as QC2. Weld variables recorded by QC2 appeared to comply with WPS-B-T-2233-ESAB as verbally identified by QC2.

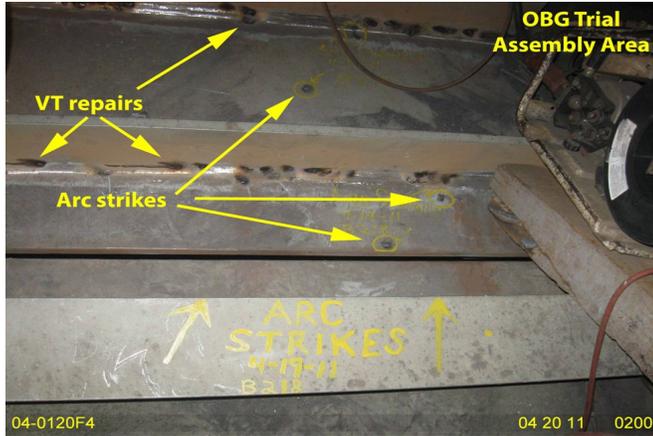
SMAW repair welding of various weld joints located inside PCMK OBG Segment 12CW, corner assembly, side plate I-ribs to side plate, north (counterweight) side. Welder was identified as 069683. QC was identified as QC2. Weld variables recorded by QC2 appeared to comply with WPS-345-SMAW-2G(2F)-repair-FCM-1 as verbally identified by QC2. QCA2 informed this QA Inspector that this repair was the response to indications observed during ZPMC or ABF visual testing.

During random observation of the welding operations inside PCMK OBG Segment 12CW, corner assembly, side plate I-ribs to side plate, north (counterweight) side, several arc strikes were observed on inside of the side plate in the corner assembly. See photos below of several of the arc strikes. This QA Inspector clearly marked the visual indications in yellow paint with the notation 'arc strikes', date, this QA Inspector's Caltrans lot number, and then informed ABF representative, CWI Ji Cai Fang (ABF CWI) of the arc strikes and marking. ABF CWI informed this QA Inspector that the arc strikes would be corrected in a manner compliant with the relevant contract documents.

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

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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