

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-024779**Date Inspected:** 01-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:

FCAW welding of weld joint SEG3013P-073 located on PCMK OBG 13AW. Welder was identified as 067275. 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 Zhang Lin (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-T-2233-ESAB as verbally identified by QCA1.

SMAW welding of weld joint SEG3007AH-063 located on PCMK OBG 13AE. Welders were identified as 068859, 200113. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhan Hai Feng (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-4314-TC-P4-2 as verbally identified by QCA2.

SMAW welding of weld joint AH3151-075 located on PCMK OBG 13BE. Welder was identified as 044772. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-2212-TC-U4b-FCM-1 as verbally identified by QCA2.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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FCAW welding of weld joints SA3128B-001~005 located at PCMK OBG 13CE/14E, transverse joint. Welder was identified as 055564. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Wang Xiang Pin (QCA3), who was not a CWI. Weld variables recorded by QCA3 appeared to comply with WPS-B-T-2232-ESAB as verbally identified by QCA3.

SMAW repair welding of weld joint OBW13B-003 located at PCMK OBG 13AW/13BW transverse joint, bottom plate. Welder was identified as 067876. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA3, who was not a CWI. Weld variables recorded by QCA3 appeared to comply with WPS-345-SMAW-1G(1F)-FCM-repair-1 as displayed on ZPMC Weld Repair Report B-CWR3008 as presented to this QA Inspector and verbally identified by QCA3.

FCAW welding of weld joints SA6002A-001, 002; SA6003A-003, 004; SA6004A-003, 004 located at PCMK OBG 12CW/13A, transverse joint. These splice plates were being welded on the ground at the Trial Assembly Area. Welder was identified as 069469. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA3, who was not a CWI. Weld variables recorded by QCA3 appeared to comply with WPS-B-T-2231-ESAB as verbally identified by QCA3.

SMAW welding of weld joints DP3148-001-275; DP3172-001-017 located at PCMK OBG 13CW/14W, transverse joint. Welder was identified as 067275. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA3, who was not a CWI. Weld variables recorded by QCA3 appeared to comply with WPS-B-P-2212-TC-U4b-FCM-1 as verbally identified by QCA3.

This QA Inspector, QA Inspector Kelly Leavitt (QA2), and QA Inspector Paul Dawson (QA3) responding to phone notification from ABF Inspectors performed a pre-final sandblast inspection inside Segment 13AE, , between panel points 119+1500 and 120, south (crossbeam) side, from deck plate down approximately 1 meter. This QA Inspector, QA2, and QA3 observed 3 indications appearing to require weld repair as well as surface irregularities requiring grinding, including approximately 30 drilled bolt holes which had not been deburred. These areas were marked and documented. See photo below of one of the 3 indications of a weld relief hole showing incomplete fusion and overlap of the weld at the junction of deck plate, floor beam at panel point 119+1500, and deck plate longitudinal diaphragm. See also photo below of 5 of the drilled bolt holes needing deburring.

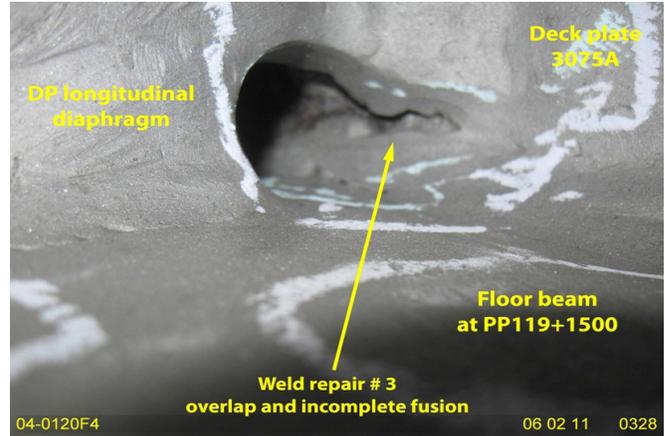
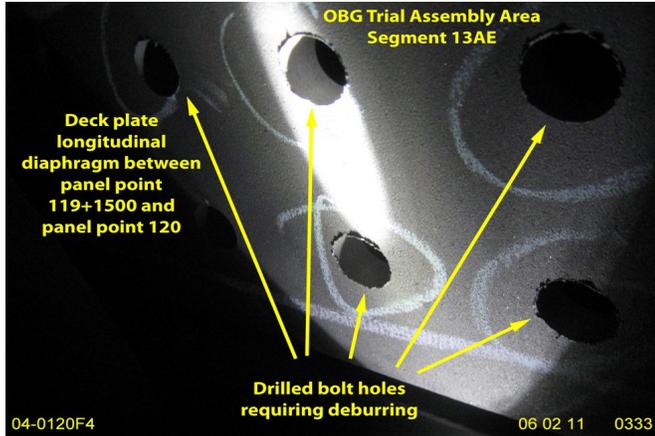
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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## 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.

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**Inspected By:** Goulet, George

Quality Assurance Inspector

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**Reviewed By:** Riley, Ken

QA Reviewer