DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-023575
Date Inspected: 01-May-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
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

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, Kelly Leavitt, was present during the times noted above for random observations relative to the work being performed.

Trial Assembly
This QA Inspector observed the following work in progress for Trial Assembly.
ZPMC was using the Shielded Metal Arc Welding (SMAW) process.
ZPMC QC is identified as Zhan Hal Fang and An Qing Ziang.
Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).
Listed below are the locations that were identified by this QA inspector.

Components; OBG
PCMK: SEG3009V 13BE
Weld No: 013,015,018,020,022
Welder: 059102
Weld Repair No. B-WR20879
WPS-345-SMAW-3G(3F)-FCM-Repair-1

Components; OBG 14 E
PCMK: SEG3019AL
Weld No: 010
Welder: 215553

Weld Repair No. B-WR20235
WPS-345-SMAW-3G(3F)-FCM-Repair-1

This QA Inspector observed the following work in progress for Trial Assembly.
ZPMC was using the Flux Core Arc Welding (FCAW) process.
ZPMC QC is identified as Zhan Hal Fang and An Qing Ziang.
Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).
Listed below are the locations that were identified by this QA inspector.

Components; OBG 13AE
PCMK: SEG3007L
Weld No: 138
Welder: 066501
WPS-B-T-2231-ESAB

Components; OBG 13AE
PCMK: SA3034-002
Weld No: 010
Welder: 050979
WPS-B-T-2231-ESAB

Components; OBG 14 E
PCMK: SEG3019D-2
Weld No: 197,201,205,209,213
Welder: 055564
WPS-B-T-2233-ESAB

This QA Inspector observed the following work in progress for Trial Assembly.
ZPMC was using the Flux Core Arc Welding (FCAW) process.
ZPMC QC is identified as Wong Zhu and QA Cas Hai Zhon.
Welding variables recorded by QC appeared to comply with the approved Welding Procedure Specification (WPS).
Listed below are the locations that were identified by this QA inspector.

Components; OBG 13AW
PCMK: SEG3013N
Weld No: 217
Welder: 201215
WPS-B-T-2233-ESAB

Components; OBG 13AE
PCMK: EP3115A-X3582
Weld No: 001,002
Welder: 050977
WPS-B-T-2232-ESAB

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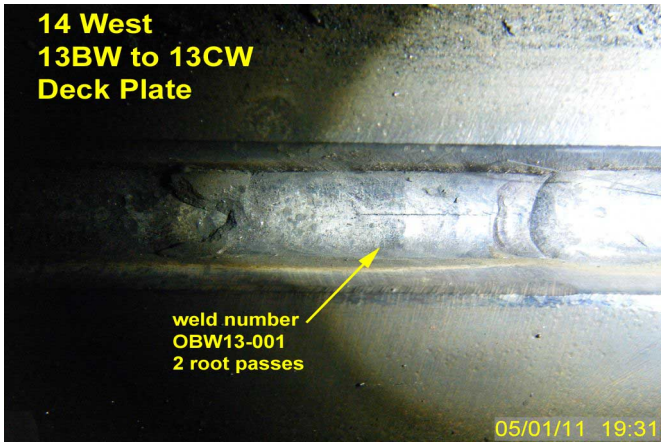
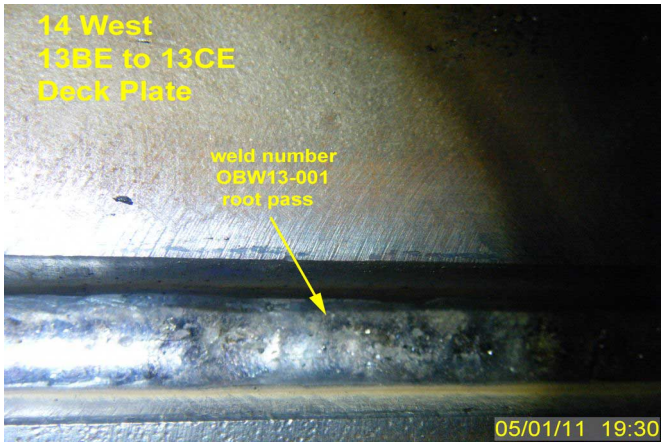
Components; OBG 13BW (see photo below)
PCMK: OBW13
Weld No: 001
Welder: 040270
WPS-B-T-2231-ESAB

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





Summary of Conversations:
This QA Inspector is continually monitoring until repaired, longitudinal cracks and porosity in the root of weld number OBW13-001, 13AW to 13BW deck panel splice. ZPMC was alerted of the problem April 30 and CWI Wong Zhu investigated and stopped the welding at 22:00 hours. The weld is to be a complete joint penetration with a flux core arc weld for a root, the rest filled with submerged arc, then the B side ceramic removed, back gouged with carbon arc cutting, magnetic particle tested for imperfections and filled with shielded metal arc welding. All FCAW welding components were checked against WPS-B-T-223(2)1T-ESAB and found to be within the parameters of that document. Pictures and statement of findings was turned over to day shift lead personal through e-mail for follow up. No other investigation is warranted at this time. (see photos)

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 1500026784, who represents the Office of Structural Materials for your project.

Inspected By:	Leavitt,Kelly	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer