

**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-023577**Date Inspected:** 04-May-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**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.

**Bay 14**

This Caltrans QA Inspector during random observation at ZPMC noted that gouging was being performed, in preparation for weld repairs, using the Carbon Arc Cutting (CAC) process on BK016-001, Bike Path Support Arm. Also noted at this location was ZPMC grinding these back gouge areas to a bright metal finish in preparation for the welding process as outlined in the contract documents.

This Caltrans QA Inspector observed at random intervals ZPMC performing grinding of welds located in Segment X3305K-041, 047, 043, and 049 at various locations due to contour grinding and visual indications as identified by ZPMC QC Inspectors.

This Caltrans QA Inspector observed ZPMC performing match drilling in splice plates X3556A and X3911A for 13E.

**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).

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## WELDING INSPECTION REPORT

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Listed below are the locations that were identified by this QA inspector.

Components; OBG  
PCMK: SEG3019\*  
Weld No: 033  
Welder: 216086  
Weld Repair No. B-WR20899  
WPS-345-SMAW-4G(4F)-FCM-Repair-1

Components; OBG  
PCMK: SEG3019D-1  
Weld No: 065  
Welder: 215553  
Weld Repair No. B-WR20874  
WPS-345-SMAW-4G(4F)-FCM-Repair-1

Components; OBG  
PCMK: SEG3019AG  
Weld No: 049  
Welder: 044779  
Weld Repair No. B-WR20469  
WPS-345-SMAW-1G(1F)-FCM-Repair-1

Components; OBG 13CE  
PCMK: VP3007-001  
Weld No: 003,017,018,015,028  
Welder: 058102  
Weld Repair No. B-WR20767  
WPS-345-SMAW-1G(1F)-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 Shen Jian Bo 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 (see photo)  
PCMK: OBE13  
Weld No: 002,003  
Welder: 055491, 055564, 050242, 051356, 059696  
WPS-B-T-2231-ESAB

Components; OBG 13BE to 13CE  
PCMK: SA3030-001

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Weld No: 003,005,007

Welder: 050977

WPS-B-T-2231-ESAB

Components; OBG 13BE to 13CE

PCMK: SA3030-002

Weld No: 003,005,007

Welder: 050977

WPS-B-T-2231-ESAB

Components; OBG 13CW

PCMK: SA3126-(003~005)

Weld No: 005~007

Welder: 045143

WPS-B-T-2231-ESAB

Components; OBG 13CW

PCMK: SA3126-(020~025)

Weld No: 005~007

Welder: 045280

WPS-B-T-2231-ESAB

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 Shen Jian Bo 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 14 W

PCMK: SEG3020AH

Weld No: 002,003,004

Welder: 066673

WPS-B-P-2212-TC-U4b-FCM-1

Components; OBG

PCMK: SEG3015K

Weld No: 209~220

Welder: 045196

WPS-B-P-2214-TC-U4b-FCM-1

Components; OBG 13AW

PCMK: SEG3013M

Weld No: 188

Welder: 067904

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Weld Repair No. B-WR20695  
WPS-345-SMAW-3G(3F)-FCM-Repair-1

Components; OBG 13AW

PCMK: SEG3013P

Weld No: 198,203,208

Welder: 067904

Weld Repair No. B-WR20695

WPS-345-SMAW-3G(3F)-FCM-Repair-1

Components; OBG 13AW

PCMK: SEG3013M

Weld No: 093,099,105

Welder: 067904

Weld Repair No. B-WR20695

WPS-345-SMAW-4G(4F)-FCM-Repair-1

Components; OBG 14 W

PCMK: SEG3020U

Weld No: 591

Welder: 045246

Weld Repair No. B-CWR2943

WPS-345-SMAW-4G(4F)-FCM-Repair-1

Components; OBG

PCMK: SEG3020D

Weld No: 018,019

Welder: 067942

WPS-B-P-2114-TC-FCM-1

Components; OBG 14 W

PCMK: SEG3020AH

Weld No: 002,003,004

Welder: 066673, 066674

WPS-B-P-2212-TC-U4b-FCM-1

Components; OBG 14 W

PCMK: SEG3013B

Weld No: 236,237

Welder: 037779

WPS-B-P-2213-FCM-1

Heat straightening of PCMK: LD3041A under approved Heat Straightening procedure, HSR1 (B)-10321. The in process temperature was observed as 420°C. The ZPMC QC was identified as Shen Jian Bo. The approved HSR

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# WELDING INSPECTION REPORT

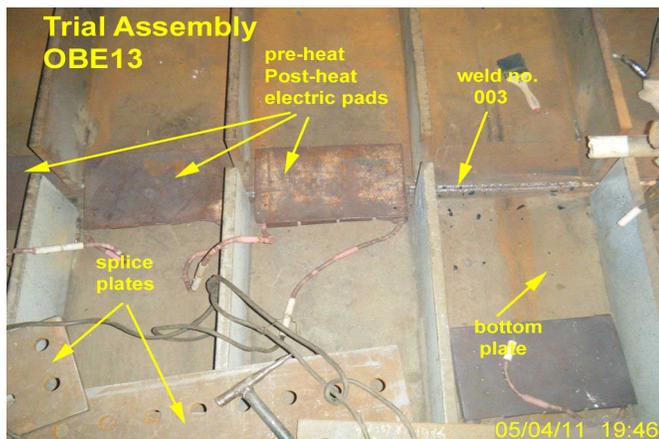
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procedure stated that a maximum temperature of 650°C with 1-3 numbers of applications was allowed. The distortion that was previously measured and recorded on the HSR was Maximum 30mm.

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



### Summary of Conversations:

“No relevant conversations.”

### 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.

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**Inspected By:** Leavitt, Kelly

Quality Assurance Inspector

**Reviewed By:** Riley, Ken

QA Reviewer

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