

**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-023134**Date Inspected:** 01-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**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 QA Inspector observed the following work in progress for Bay 14.

ZPMC was using the Shielded Metal Arc Welding (SMAW) process.

ZPMC QC is identified as Wong Xiang Pin, CWI Wang Jun.

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: SEG3020AQ

Weld No: 025

Welder: 066398, 066002, 066443

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

Components; OBG 14 W

PCMK: SEG3020BB

Weld No: 038

Welder: 067829

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

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Components; OBG 14 W  
PCMK: DP3175, DP3176, DP3177  
Weld No: FIT UP  
Welder: 049972  
WPS-B-P-2212

This QA Inspector observed the following work in progress for Bay 14.  
ZPMC was using the Flux Core Arc Welding (FCAW) process.  
ZPMC QC is identified as Wong Xiang Pin, CWI Wang Jun.  
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 13BW  
PCMK: SA3125-001  
Weld No: 001,002  
Welder: 201583  
WPS-B-T-2231-ESAB

Heat straightening of PCMK, BK29BK5 under approved Heat Straightening procedure, HSR1 (B)-10227. The in process temperature was observed as 630°C. The ZPMC QC was identified as Guo Xing Hai. The approved HSR 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 6mm.

(see photo below)

Heat straightening of PCMK, BK29BK4 under approved Heat Straightening procedure, HSR1 (B)-10227. The in process temperature was observed as 530°C. The ZPMC QC was identified as Guo Xing Hai. The approved HSR 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 6mm.

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

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## Summary of Conversations:

During random inspection of bike path beams this QA Inspector observed BK29BK5 had what appears to be signs of overheating “blistering” on the web of the beam. This QA Inspector, ZPMC Quality Control Guo Xing Hai, American Bridge / Flour Quality Assurance Chen Kun, and the ZPMC employee performing the heat straightening reviewed document HSR1 (B) 10227 with special attention given to maximum temperature 650°C. After this conversation no other action is required at this time.

## 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

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**Reviewed By:** Riley,Ken

QA Reviewer