

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006434**Date Inspected:** 25-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**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:** crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG cross beam CB1

This QA observed ZPMC qualified welding personnel identified as 216872 perform FCAW welding on weld joints identified as BP211-001-023 and 032. ZPMC QC CWI identified as Mr. Chen Xi was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2233-B-U2-F.

This Quality Assurance Inspector (QA) observed the contractors welding personnel excavating weld repairs on SPCM material while the material was wet on the far side of the repaired area. The welder was arc gouging on the corner joint between east side panel and bottom panel with standing water on the far side of the joint. See attached photos. The gouging was taking place approximately 2500mm from the south end of the cross beam. Four areas were being excavated. All four excavations were located in a 1500mm area along the length of the weld. AWS D1.5 2002 section C3, paragraph C3.1.3 states "Welding shall not be done under conditions that may lead to poor weld quality. Any source of moisture such as condensation, dew, rain, or snow is a source of hydrogen during welding and shall be eliminated. Moisture increases the risk of hydrogen-induced cracking and other weld discontinuities". This QA notified ZPMC QC identified as Mr. Shen Xuejun and ABF QC inspector identified as Mr. Kelvin Cheung of this issue and that an incident report would be forth coming.

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## OBG cross beam CB2

This QA observed that ZPMC has blasted and primed this crossbeam as of last night. No other significant work was observed on this cross beam during the time QA was present.

## OBG cross beam CB3

This QA observed ZPMC personnel perform clean up and grinding. No other significant work was observed on this cross beam during the time QA was present.

## OBG cross beam CB4

This QA observed ZPMC personnel perform clean up, grinding and weld repairs marked by ZPMC QC and ABF QC. No other significant work was observed on this cross beam during the time QA was present.

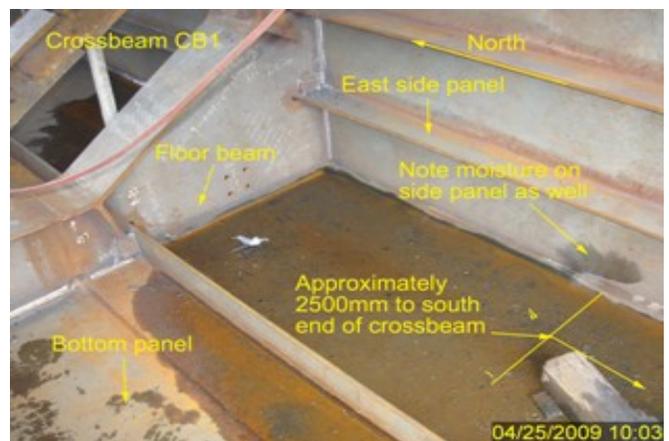
## OBG cross beam CB5

This QA observed ZPMC personnel appear to have completed the fit up of the bottom panel to the cross beam side panels. QA observed ZPMC QC CWI perform in process dimensional inspection. No other significant work was observed on this cross beam during the time QA was present.

## OBG cross beam CB6

This QA observed ZPMC personnel have commenced the fit up and tack welding of the floorbeams to the side panels on this crossbeam. No other significant work was observed on this cross beam during the time QA was present.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

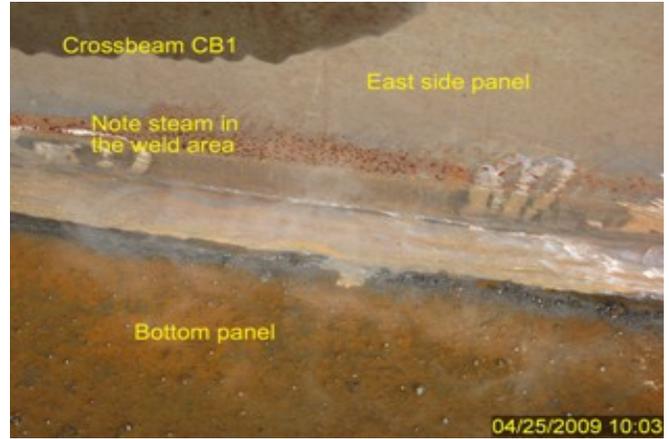


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## Summary of Conversations:

As mentioned 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 Eric Tsang (15000422372), who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hall,Steven	Quality Assurance Inspector
<b>Reviewed By:</b>	Prue,Erik	QA Reviewer

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