

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008024**Date Inspected:** 01-Aug-2009**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:** Zhang Xian Ji  
**Inspected CWI report:** Yes No N/A  
**Electrode to specification:** Yes No N/A  
**Qualified Welders:** Yes No N/A  
**Approved Drawings:** Yes No N/A

**CWI Present:** Yes No  
**Rod Oven in Use:** Yes No N/A  
**Weld Procedures Followed:** Yes No N/A  
**Verified Joint Fit-up:** Yes No N/A  
**Approved WPS:** Yes No N/A  
**Delayed / Cancelled:** Yes No N/A

**Bridge No:** 34-0006**Component:** Assembly bays 13 and 14**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:

## Assembly bay 13

This QA observed ZPMC qualified welding personnel identified as 060683 perform SMAW welding on segment 8CE weld joint identified as SEG048B-032. ZPMC QC identified as Mr. Wang Xu 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-P-2214-B-U2-FCM-1.

This QA observed ZPMC qualified welding personnel identified as 216086 perform SMAW welding on segment 8CE weld joint identified as SSD18-PP070-005. ZPMC QC identified as Mr. Wang Xu 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-P-2213-B-U2-FCM-1.

This QA observed ZPMC qualified welding personnel identified as 049339 perform SMAW welding on segment 8CW weld joint identified as SEG047\*-046. ZPMC QC identified as Mr. Wang Xu 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-P-2214-Tc-U4b-FCM-1.

This QA observed ZPMC qualified welding personnel identified as 051359 perform SMAW welding on segment 8CW weld joint identified as SSD21-PP067.5-129~132. ZPMC QC identified as Mr. Wang Xu was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments

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appeared to be in general compliance with WPS-B-P-4113-2.

This QA observed ZPMC qualified welding personnel identified as 050242 and 055491 perform FCAW welding on segment 8AW weld joint identified as SEG043A-032. ZPMC QC identified as Mr. Wang Xu 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-2231-B-U2-F.

Assembly bay 14

This QA observed ZPMC qualified welding personnel identified as 051356 perform FCAW welding on segment 9AE weld joint identified as SSD19-PP073-135. ZPMC QC identified as Mr. Zhang Xian Ji 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 QA observed ZPMC qualified welding personnel identified as 044795 perform FCAW welding on segment 9AE weld joint identified as SSD19A-PP073-131. ZPMC QC identified as Mr. Zhang Xian Ji 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 QA observed that the contractor appears to have deviated from the weld joint design specified on the approved drawings. The contractor appears to have changed the weld joint from a fillet weld to a Complete Joint Penetration (CJP) weld with steel backing without the Engineers approval. According to the contractors QC inspector, Mr Zhang Xian Ji, the weld design was changed in order to compensate for a joint root opening in excess of 5mm. This condition exists in the following locations: OBG segment 9AE @ PP072 weld joining floor beam FB003-131 to floor beam FB016-029; OBG segment 9AE @ PP073 weld joining floor beam FB003-151 to floor beam FB016-030 and OBG segment 9BE @ PP074 weld joining floor beam FB003-142 to floor beam FB020-007. See attached photos for details. This QA has submitted an incident report concerning this issue.

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



## Summary of Conversations:

As mentioned above.

## Comments

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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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