

**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-001729**Date Inspected:** 19-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1600**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi and Hu Wei Ging**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 side and deck panels**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 bay 1

QA observed ZPMC qualified welding personnel perform the Gas Metal Arc Weld (GMAW) and Submerged Arc Weld (SAW) PMT for deck panels DP-135-001 and DP-001-001 on gantry #2. Prior to the execution of the test, ZPMC Quality Control (QC) personnel discovered one tack on one of the PMT closed rib assemblies had broke. ZPMC QC personnel rejected the assembly and had it removed from the gantry table and replaced with another closed rib assembly. The GMAW PMT started at 0907 and the SAW PMT was completed at 0945. After the test was completed QA observed ZPMC QC personnel visually inspect the PMT welds. QC noted a few areas of under fill while QA in addition to the under fill noted what appeared to be overlap in several areas. Details of QA's findings and welding parameters are recorded on the PMT weld log dated today for the above mentioned deck panels.

After the completion of the PMT QA observed ZPMC qualified welding personnel perform the GMAW welds joining the closed U-Ribs to deck panel DP-001-001 and deck panel DP-135-001. QA observed four ZPMC QC inspectors in the vicinity of the welding operations including ZPMC CWI identified as Chen Xi. There were also five American Bridge/Fluor (ABF) inspectors in the area as well.

QA and QC monitored the welding process continuously throughout the day. The welding parameters as

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measured with the calibrated gages on the machines appeared to be in conformance with the posted WPS's.

## DP-001-001 GMAW

Volts: 29.7 – 30.3 Amps: 345 – 377 Travel Speed: 526 mmpm

## DP-001-001 SAW

Volts: 24.3 – 25.6 Amps: 680 - 685 Travel Speed: 510 mmpm

## DP-135-001 GMAW

Volts: 29.6 – 30.4 Amps: 350 – 375 Travel Speed: 526 mmpm

## DP-135-001 SAW

ZPMC did not start SAW process before QA shift end. Refer to production deck panel weld log dated 03/19/08 for DP 001-001 and DP-135-001 for more details.

QA departed this area before welding was completed for deck panel DP- 135-001.

## OBG new assembly bay

QA observed ZPMC qualified welding personnel perform Submerged Arc Welding (SAW) joining side panel SP-065 to SP-077. This weld was being performed on the second side of the CJP. QA observed three ZPMC Quality Control (QC) personnel including CWI identified as Hu Wei Ging in the vicinity of the welding along with two American Bridge/Fluor (ABF) Quality Control representatives.

QA departed this area before welding was completed.



## Summary of Conversations:

As noted 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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