DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-003800
Date Inspected: 01-Sep-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1400
OSM Departure Time: 2300
Location: Shanghai, China

CWI Name:	Sun Wei		**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 deck panel DP-440-001

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 tack welding uribs to deck panel DP-440-001. While observing the tack welding, QA noted that when the welder was “back filling” the crater at the end of the tack, the welding wire speed slowed dramatically. This reduction in wire speed also reduced the welding amperage from 328 amps to 121 amps and the voltage from 29 volts to 17 volts as measured with QAs calibrated Fluke multi meter. WPS# WPS-B-T-2342-U2-(urib) specifies the amps to be 320.4 to 350 and the volts to be 28.5 to 32.7 and makes no mention of reducing the amps and volts to back fill the crater at the end of the tack. ZPMC CWI identified as Mr. Sun Wei informed this QA inspector that ZPMCs engineer instructed the welders to perform these tacks in this manor. QA recorded a video of the tacking process and put it on the team china Server for all concerned parties to view. It is under “Team OBG” the file name is “DP-440-001 tack video”. Note how the wire speed on the wire feeder is reduced toward the end of the tacking process for approx. 2 to 3 seconds. Tacking of these ribs was incomplete at the end of the shift. QA and QC monitored the tack welding through out the evening. The welder ID and welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS’s with the exception of one end of the tacks as described above and were as follows:

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

Volts: 29 Amps: 328 Travel speed: 499mm/min
Welder ID: 059409

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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer