

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 #: 04-0120F4Cty: 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-000655**Date Inspected:** 14-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Xu Le Feng, Zhu Zhonyhai, Li Wen Sheng			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:** 77 & 89 meter mock-up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

89 Horizontal Beam Plate:

QA Inspector Brannon randomly observed ZPMC qualified welders Mr. Wang Zhong Hua ID #053753 and Mr. Dai Lu ID#048659 groove welding joining piece #SA24-1 to P913-1 and SA24-2 to P913-2, weld joint #9A and 10B respectively. Mr. Hua and Mr. Lu was observed welding in the 2G (horizontal) position utilizing a shielded metal arc welding (SMAW) process with a 4.8mm diameter electrode, filler metal brand Excaliber E9018M, class E9018M-H4R, manual. QA Inspector Brannon observed the ZPMC QC Inspector Xu Le Feng and Bureau Veritas Mr. Li Wen Sheng verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 160°C and measured the welding parameters to be 256/260 amps respectively. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-3212-TC-u5b, Revision 0.

77 Meter Skin Plate E:

QA Inspector Brannon randomly observed ZPMC qualified welder's Mr. Yang Lei ID #040690 and Mr. Zhai Qingshan ID#040690 tack welding joining lifting device to the skin plate. Mr. Lei and Mr. Qingshan was observed welding in the 2F (horizontal) position utilizing a shielded metal arc welding (SMAW) process with a 5.0mm diameter electrode, filler metal brand TL-508, class E7018 manual. QA Inspector Brannon observed the

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

ZPMC QC Inspector Zhu Zhonyhai and Bureau Veritas Mr. Li Wen Sheng verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 110°C and measured the welding parameters to be 215/220 amps respectively. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-P-2211, Revision 1.

NDT UT repair (VT/MT):

QA Inspector Brannon observed ZPMC Magnetic Particle Testing Technician Mr. Cai Xinxin, at the 114 Meter Mockup-Skin Plate A Sub Assembly-MA106 weld joint #3 performing magnetic particle testing (MT) on the 85mm (length)x46mm(width) for weld joint #3, one hundred percent of the excavation was inspected by Mr. Cai Xinxin. QA Inspector Brannon performed random visual inspection (VT) and magnetic particle testing (MT) on the 85mm (length) x 46mm (width) for weld joint #3. See Caltrans Magnetic Particle Test Report, TL-6028 dated October 14, 2007 for additional information.

NDT (VT/MT):

QA Inspector Brannon observed ZPMC Magnetic Particle Testing Technician Mr. Cai Xinxin, at the 89 Meter Mockup-Skin Plate C, Sub Assembly-MA23 weld joint #1, 2, 3 & 4 performing magnetic particle testing (MT) on the cover pass for the 89 meter mock-up skin plate C, sub assembly MA23 weld joints #1, 2, 3 & 4, one hundred percent of the weld length was inspected by Mr. Cai Xinxin. QA Inspector Brannon performed random visual inspection (VT) and magnetic particle testing on the cover pass for the 89 meter mock-up skin plate C, sub assembly MA23 weld joints #1, 2, 3 & 4. See Caltrans Magnetic Particle Test Report, TL-6028 dated October 14, 2007 for additional information. NOTE: NDT Technician Mr. Cai Xinxin and QA Inspector Brannon noticed an indication on the edge of the plate at weld joint #4 in the run off tab area. ZPMC Mr. Cai Xinxin and Bureau Veritas Mr. Li Wen Sheng stated that after ZPMC has removed the run off tab by method of machining that ZPMC would perform Magnetic Particle Testing on this joint and inform Caltrans when the 89 Meter Mockup-Skin Plate C, Sub Assembly-MA23 machining is complete and ready for testing.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

As stated within the report.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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.

Inspected By:	Brannon, Sherri	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
