

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-001082**Date Inspected:** 09-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Cui Yiru, Guo Gang**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:** 89 M mockup and OBG floor beam**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.

Bay 7**OBG - Floor Beam**

The QA Inspector Brannon randomly observed ZPMC welding personnel utilizing the carbon air arc gouging process to back gouge welds in Floor Beam splice weld joints FB002-04-026 side b, FB001-04-026 side b and FB007-04-026 side b in preparation for submerged arc welding (SAW) process.

OBG - Floor Beam

QA Inspector Brannon randomly observed ZPMC qualified welder Mrs. Huang Xin Lan ID #044780 groove welding fill pass for weld joint # FB026-02-108 joining x20A to x20B side b. Mrs. Huang was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12k, class JW3 machine. QA Inspector Brannon observed the ZPMC QC Inspector Cui Yiru verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed welding parameters measured by the QC CWI Inspector Cui Yir welding parameters to be 532 amps, 31.0 volts and a travel speed of 410 mm/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-B-L2c-S-1, Revision 0.

Bay 2

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

89 Meter Mockup Sear Link Beam (FCM):

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Lei Lichao ID #053619 groove welding fill pass joining, piece # MA29 to mp518-1. Mr. Lei was observed welding in the 2G (horizontal) position utilizing flux cored arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 semi automatic. QA Inspector Brannon observed the ZPMC QC CWI Inspector Guo Gang verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Guo Gang to be: preheat temperature of 160°C and welding parameters amps of 317, volts of 31.0, a travel speed of 315 mm/min and a shielding gas flow of 24L/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2332 TC-P4-F.

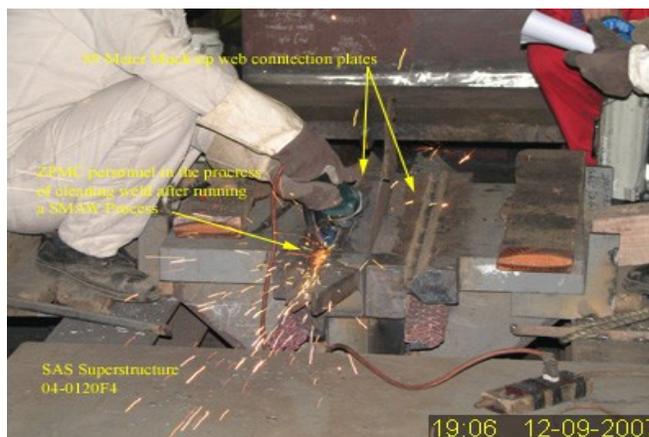
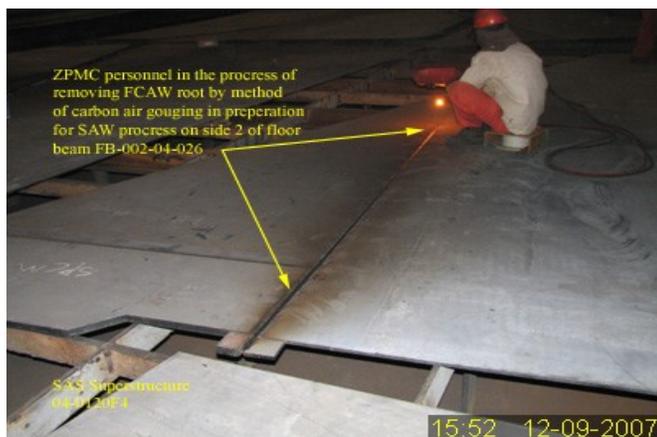
89 Meter Mockup Web Connection plate MUSB-MA21-F/J:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Dai Lu ID #048659 groove welding fill passes for weld joint #3B. Mr. Dai was observed welding in the 1G (flat) position utilizing shielded metal arc welding (SMAW) process with a 4.8mm diameter electrode, filler metal brand E9018M-H4R, class Excalibur9018M MR, manual. QA Inspector Brannon observed the ZPMC QC CWI Inspector Guo Gang verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Guo Gang to be: preheat temperature of 160°C and welding parameters amps of 276. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-3211 TC-U5b.

89 Meter Mockup Web Connection plate MUSB-MA21-F/J:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Wang Zhonghus ID #053753 groove welding fill passes for weld joint #4B. Mr. Wang was observed welding in the 1G (flat) position utilizing shielded metal arc welding(SMAW) process with a 4.8mm diameter electrode, filler metal brand E9018M-H4R, class Excalibur9018M MR, manual. QA Inspector Brannon observed the ZPMC QC CWI Inspector Guo Gang verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Guo Gang to be: preheat temperature of 160°C and welding parameters amps of 285. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-3211 TC-U5b.

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



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

No relevant conversations to report.

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:	Carreon, Albert	QA Reviewer
