

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-001692**Date Inspected:** 21-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng, Ye Yong Jun**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:** Tower Mock-ups and OBG**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

Bay 1

The Quality Assurance Inspector observed ZPMC welding operator Zhao Cheng Shaung welder identification number, 059400 performing in process welding of closed U rib butt splice connection on several ribs. Quality Control Inspector Ye Yong Jun was monitoring the welders. The welder was using the flux cored arc welding process to produce the complete joint penetration weld in the vertical position. The Quality Assurance Inspector measured the welding parameters at the welders station and found the parameters to meet the minimum requirements of welding procedure specification WPS-B-T-2233-Bu2-F. The Quality Assurance Inspector measured the amperage at approximately 208, the voltage at approximately 25, and the travel speed at approximately 209 millimeters per minute. The Quality Assurance Inspector witnessed Quality Control measuring the interpass temperature using a calibrated infra-red temperature measuring device.

The Quality Assurance Inspector witnessed ZPMC Ultrasonic technician performing Ultrasonic testing to production monitoring test ribs for Deck Panel DP-059-001. No areas were marked by the technician.

The Quality Assurance Inspector performed an inventory of the closed rib status. The information recorded was as follows: 54 rib plates stored awaiting to be squared on the milling machine, 93 plates squared, 25 plates beveled, 138 plates bent, 18 ribs diaphragm plates welded, 4 rib assemblies tacked to deck panels, and 7 closed U rib

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

assemblies welded. The information was forwarded to Assistant Structure Material Representative Ady Valasco.

The Quality Assurance Inspector performed a random inspection of the bevel preparation of numerous closed U rib butt splice connections. The Quality Assurance Inspector measured the bevel angles and the root face dimensions of the complete joint penetration welds and marked the findings adjacent to the joint. The Quality Assurance Inspector informed ZPMC Quality Control Inspector Ye Yong Jun of several areas not in accordance with the approved welding procedure specification. Mr. Ye relayed that prior to welding the bevel preparation would be corrected by grinding. The Quality Assurance Inspector measured the bevel angle anywhere from 28 to 43 degrees and the root face measurement as much as 7 millimeters. Below are two digital photographs illustrating the discrepancies.



Summary of Conversations:

As stated in the contents of the above 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: Bertlesman, Greg

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer