

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-001563**Date Inspected:** 24-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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, 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.

Tower Fabrication Facility**89M Mock-up Assembly**

The Quality Assurance Inspector observed a ZPMC welder performing in process welding of a complete joint penetration weld joining Skins A to E. The welder was using the flux cored arc welding process to produce the weld in the flat position from the interior of the assembly. The Quality Assurance Inspector observed that approximately 70% of the skin welds were completed to date.

The Quality Assurance Inspector observed twelve half sections of diaphragm plates stored adjacent to the cutting table. The Quality Assurance Inspector observed no cutting was taking place of material today.

Bay 1

The Quality Assurance Inspector observed ZPMC squaring the length of closed ribs on the milling machine. Eight ribs were stacked and being milled simultaneously. The Quality Assurance Inspector measured the ribs to be approximately five meters in length, 12 millimeters in thickness and 790 millimeters in width.

The Quality Assurance Inspector observed ZPMC setting up the semi automated gas metal arc welding gantry system for a practice closed rib assembly.

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Bay 2

Diaphragm Plate Cutting

The Quality Assurance Inspector observed ZPMC performing cutting operations on there cutting table utilizing a natural gas and oxygen mix. The diaphragm plates were for 28M and 33M elevations.

114M Mock-up Upper and Lower Shaft Assembly

The Quality Assurance Inspector observed the ZPMC using string lines in preparation for the bolt hole template. Three 50 ton hydraulic jacks are still in place and pressurized.

77M Mock-up Assembly

The Quality Assurance Inspector observed no ZPMC personnel working on the 77M mock-up assembly today.

The Quality Assurance Inspector observed layout lines being drawn on type 1 and type 3 diaphragm plates in preparation for heat straightening. Below is a digital photograph illustrating the layout lines being drawn on the various diaphragm plates staged.

Bay 3

The Quality Assurance Inspector observed ZPMC continuing to perform heat straightening operations to a side plate identified as SP-017. Quality Control contained HSR 1(B)-168. The Quality Assurance Inspector observed Quality Control using a calibrated infer-red temperature indicating gun to monitor the heat.

Side Plate 007

The Quality Assurance Inspector observed three ZPMC welding operators, Dong Jin Bao, Xin Meng, and Sun Tiyu, performing in process welding of plate stiffeners. Quality Control Inspector Hu Wei Qing was monitoring the welder. The welders were observed using the semi automated flux cored arc welding process to produce the fillet weld in the horizontal position. The part was left stationary while the welding apparatus was on tracks to facilitate welding along the length of the part. 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-2132-3. The Quality Assurance Inspector measured the amperage at approximately 285, the voltage at approximately 30, and the travel speed at approximately 475 millimeters per minute. The Quality Assurance Inspector witnessed Quality Control measuring the interpass temperature using a calibrated infra-red temperature gun.

Bay 7

The Quality Assurance Inspector observed the tack welding of several plate stiffeners to floor beams being welded in the horizontal position.

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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
