

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-001955**Date Inspected:** 30-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**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:** OBG and Tower Mock up**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

The Quality Assurance Inspector observed ZPMC performing heat straightening operations to diaphragm plate P311. The Quality Assurance Inspector observed ZPMC Quality Control measuring the heat with an infra-red temperature indicating device.

The Quality Assurance Inspector observed ZPMC beveling various Skin Plates. Below is a digital photograph of the beveling in progress.

Skin Plate P150

The Quality Assurance Inspector observed a ZPMC welding operator, performing in process welding of Skin P150 butt splice. Quality Control Inspector Yang Bai Quang was monitoring the welder. The welder was using the submerged arc welding process to produce the complete joint penetration weld in the flat position. The Quality Assurance Inspector measured the welding parameters at the welder's station and found the parameters to meet the minimum requirements of the posted welding procedure specification. The part was stationary while the welding machine was on tracks to facilitate welding along the length of the part. The Quality Assurance Inspector witnessed Quality Control measuring the interpass temperature using a calibrated infra-red temperature measuring device.

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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 eight meters in length, 12 millimeters in thickness and 790 millimeters in width. The Quality Assurance Inspector observed ZPMC drilling bolt holes in the closed ribs. ZPMC was observed beveling closed ribs in preparation for the partial joint penetration connection to the deck plate. ZPMC Quality Control would measure the bevel angle and record the values on the closed rib.

Bay 2

77M Mock-up Assembly

The Quality Assurance Inspector observed ZPMC continuing to cut various sections of the 77M mock-up sub assembly for the purpose of for macro-etch evaluation.

114M Mock-up Assembly

The Quality Assurance inspector observed no ZPMC personnel working on the 114M mock-up assembly.

Bay 3

The Quality Assurance Inspector observed ZPMC fitting up and tack welding T stiffeners to various side panel assemblies.

Bay 4

The Quality Assurance Inspector performed a survey of the diaphragm plates within bay 4. The Quality Assurance Inspector observed 5 diaphragms in various stages of welding in progress, 33 half sections of diaphragms in various stages of heat straightening, and 27 diaphragm plate flanges bent and stored.

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 Patrick Lowry, 916 227-5719, who represents the Office of Structural Materials for your project.

Inspected By:	Bertlesman,Greg	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
