

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-001777**Date Inspected:** 25-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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 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 8.5 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. The general appearance of the bevel appeared to be rough and contain sharp edges. After beveling, ZPMC was observed bending the closed ribs and performing dimensional inspections.

Closed Rib Diaphragm Plate Fit-Up

The Quality Assurance Inspector ZPMC fitting up and tack welding, closed rib diaphragm plates. The Quality Assurance Inspector measured a gap at the radius portion of the rib to be approximately 3 millimeters. The Quality Assurance Inspector informed ZPMC Quality Control that the fillet weld size would need to be increased per AWS D1.5. Below is a digital photograph illustrating the gap.

Bay 2

No ZPMC personnel were observed working on the 114M Tower Mock-up upper and lower shaft assembly.

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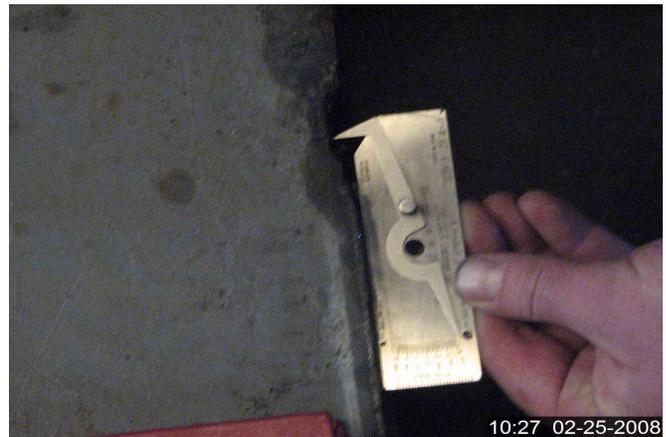
The Quality Assurance Inspector observed ZPMC performing cutting operations on there cutting table. ZPMC Quality Control relayed they were utilizing a natural gas and oxygen mix. ZPMC was observed cutting various interior bolted connection plates identified as P108-1, P654-1, P665-1 and P667-1.

Bay 3

The Quality Assurance Inspector observed ZPMC fitting up and tack welding Side Plates SP-604 and SP-524. The Quality Assurance Inspector observed ZPMC utilizing the multiple head gantry flux cored arc welding gantry to weld Side plates SP-471 and SP-563.

Bay 8

The Quality Assurance Inspector observed ZPMC performing heat straightening operations to a diaphragm plate identified as P778. Quality Control relayed the operations were in accordance with HSR 1(T)-047. The Quality Assurance Inspector witnessed Quality Control using a calibrated infra-red temperature indicating device to monitor the heat. The Quality Assurance Inspector observed a torch notch in the base metal of the cut surface. The Quality Assurance Inspector measured the notch to be approximately 8 millimeters in depth. The Quality Assurance Inspector informed the ZPMC Quality Control Inspector that the base metal repair requires Engineer approval. The Quality Control Inspector relayed that he understood and was providing his supervisor the data to generate a Critical Weld Repair Procedure. Below is a digital photograph illustrating the torch notch.



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

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Reviewed By: Cuellar,Robert

QA Reviewer