

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-002974**Date Inspected:** 11-Jun-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:** Sun Wei**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**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.

OBG Sub Assembly Bay 1

The Quality Assurance Inspector observed ZPMC performing gas metal arc welding to partial joint penetration closed rib to deck panel connections identified as DP-557-001 and DP-596-001.

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to Deck Panel DP-561-001 utilizing the gas metal arc welding process for the closed rib to deck panel partial joint penetration weld.

The Quality Assurance Inspector Informed ABF Representative Craig Knopps that ZPMC was failing to utilize weld tabs when welding the complete joint penetration portion of the continuity plate within closed ribs. Mr. Knopps stated that he would look into the situation further. QA Task Leaders and Assistant Structures Material Representative were informed of the discrepancy. Below is a digital photograph illustrating the weldment in progress.

Bay 2

The Quality Assurance Inspector observed four ZPMC personnel continuing to install high strength bolts, with a designation on the head marked as NL 88, to the internal bolted connection plates.

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Bay 3

The Quality Assurance Inspector observed ZPMC welding various wide flange splices for Side Plate SP-176-001. ZPMC then cuts the wide flange in half to use as the T stiffeners for the side plate sub assemblies. ZPMC was utilizing the flux cored arc welding process to perform the complete joint penetration in the flat and vertical positions.

The Quality Assurance Inspector observed ZPMC utilizing the semi automated flux cored arc welding gantry in order to weld the fillet welds of the T stiffeners on Side Plate SP190-001.

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to T stiffeners on Side Panel SP-181-001. ZPMC was utilizing the shielded metal arc welding process to produce the fillet weld in the horizontal position.

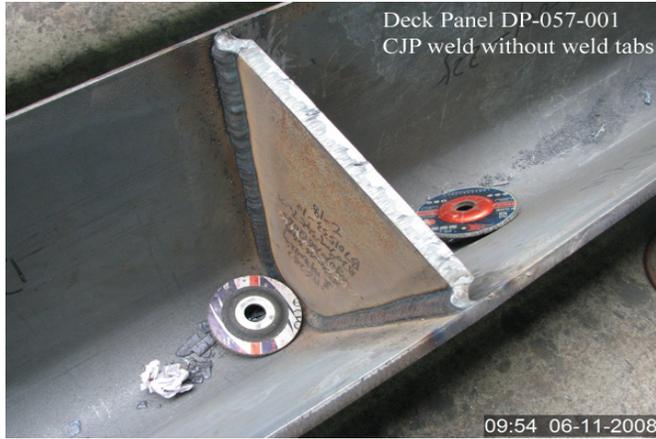
Bay 4

The Quality Assurance Inspector observed ZPMC begin to fit-up the diaphragm flange plate to Diaphragm P306. The flange was lifted in to place with an overhead crane and lowered into place. ZPMC utilized a counterweight, which was marked 9.5 tons in an attempt to force the flange into place by raising and lowering the counterweight with the crane on top of the flange. Below is a digital photograph illustrating the use of the counterweight. Later, with the flange in place but not tack welded yet the Quality Assurance Inspector observed approximately 10 millimeters of distortion which appears to have been caused by the adjacent complete joint penetration weld. Below is digital photograph illustrating the distortion.



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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 Pat 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
