

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-002973**Date Inspected:** 12-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-561-001.

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to Deck Panel DP-546-001 utilizing the gas metal arc welding process for the closed rib to deck panel partial joint penetration weld.

Bay 2

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

Bay 3

The Quality Assurance Inspector observed ZPMC welding various wide flange splices for Side Plate SP-175-001. 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.

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The Quality Assurance Inspector observed ZPMC utilizing the semi automated flux cored arc welding gantry in order to weld the fillet welds for plate stiffeners on Edge Plate EP040-001.

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.

The Quality Assurance Inspector observed ZPMC performing fit-up and tack welding operations to deck panels DP-021-001, DP-034-001, and DP-035-001.

Bay 4

The Quality Assurance inspector observed there are 9 diaphragm flanges in various stages of fabrication from fit-up of the complete joint penetration splices to welding in progress. The Quality Assurance Inspector observed that ZPMC painted a diaphragm flange for the 43M elevation for diaphragm SA27. Below is a digital photograph illustrating the painted part. The centerline of the part has been ground in preparation for welding to the diaphragm plate.

The Quality Assurance Inspector observed ZPMC performing in process welding of Diaphragm Plate WSD1-SA287 butt weld connection. Quality Control Inspector Ye Yong Jun was monitoring the welder. The welder was using the submerge arc welding process to produce the complete joint penetration weld in the flat position. The part was stationary while the welding machine was on tracks to facilitate welding along the length of the part. The Quality Assurance Inspector measured the welding parameters at the welder's station and found the parameters to meet the minimum requirements of welding procedure specification WPS-B-T-2221-B3c-S-1. The Quality Assurance Inspector witnessed Quality Control measuring the interpass temperature using a calibrated infra-red temperature measuring device.



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.

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