

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-001392**Date Inspected:** 23-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

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|------------------------------------|---|----|-----|----------------------------------|------------------------|----|-----|
| CWI Name: | Xu Le Feng, Ye Yong Jun, Sha Zi Cui, Wu Pres-Qing | | | CWI Presenting | 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 observed using the submerged arc welding process to produce the weld in the flat position from the exterior of the assembly. The Quality Assurance Inspector observed that approximately 65% 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.

Bay 2**Diaphragm Plate Cutting**

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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 fit-up of the upper to lower shafts. Three 50 ton hydraulic jacks were being utilized to aid in the fit-up. The Quality Assurance Inspector observed a ZPMC foreman measuring the offset between the two assemblies using the Quality Assurance Inspectors V vac gauge. The Foreman relayed that the offset between skins D was measured to be approximately seven millimeters. ZPMC applied more pressure to the vertical hydraulic jack and the foreman re-measured the offset. The foreman relayed that the offset was approximately five millimeters. Jacking operations ceased at this point. Below are two digital photographs illustrating the jacks in place and the 50 ton designation.

77M Mock-up Assembly

The Quality Assurance Inspector observed two ZPMC workers removing the runoff tabs at the corner stiffeners using a torch.

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 inferred temperature indicating gun to monitor the heat.

Bay 7

The Quality Assurance Inspector observed the tack welding of several plate stiffeners to floor beams. The Quality Assurance Inspector observed that the removal of the numerous transverse linear indications has ceased today.



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.

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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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