

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-001374**Date Inspected:** 22-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, 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 2 two ZPMC personnel performing back gouging operations to Skins C and D. The workers were using the air carbon arc process and grinder to produce the excavation.

Diaphragm Plate Cutting

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. The diaphragm plates were for 28M and 33M elevations.

The Quality Assurance Inspector observed no welding taking place in the Tower Fabrication Facility.

Bay 2**Diaphragm Plate Cutting**

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.

WELDING INSPECTION REPORT

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114M Mock-up Upper and Lower Shaft Assembly

The Quality Assurance Inspector observed the fit-up of the upper to lower shafts.

77M Mock-up Assembly

The Quality Assurance Inspector observed two ZPMC welders welding the corner stiffener partial joint penetration welds using the shielded metal arc welding process.

Bay 3

The Quality Assurance Inspector observed ZPMC performing 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.

Side Plate 003

The Quality Assurance Inspector observed ZPMC personnel setting up for the semi automated flux cored arc welding gantry system. Cooper heating system was in place on side plate 003.

Bottom Plate 022

The Quality Assurance Inspector observed holes being drilled utilizing a magnetic hand held drill on the T stiffeners of Bottom Plate 022.

Bay 7

The Quality Assurance Inspector was informed Quality Control performed magnetic particle inspection to 28 floor beams. Quality Control magnetic particle technician Cai Xin Xin relayed that twenty two of the twenty eight were rejected due to transverse linear indications. The Linear indications appear to be cracks. The Quality Assurance Inspector observed where Quality Control had marked the indications either on the fillet weld joining the stiffener to web connection or the complete joint penetration weld joining the flange to web. The Quality Assurance Inspector observed ZPMC removing the indications using either a grinder or the air carbon arc process. Quality Assurance Inspector Timothy McClendon generated an Incident Report pertaining to ZPMC not informing the Engineer before removing the cracks.

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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