

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-001316**Date Inspected:** 16-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2130**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Cui Yi Ru**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, 77, 89 & 114 Meter Mock-Up**Summary of Items Observed:**

This Quality Assurance Inspector oversaw Quality Assurance Inspectors Paul Stovall, and Gabriel Quintana performing fabrication inspection out on the shop floor today.

Mr. Stovall observed welding in the New Tower Shop on the 89 Meter Mock-up. His finds today included two cracked tack welds between the skin plate E smaller longitudinal stiffener and each of the diaphragm plates. This was on weld joints MUB-MA21 A/J-3 & MUB-MA21 G/J-3. Mr. Stovall also witnessed welding of weld joints MUB-MA21 A/J -35 & 36 and grinding on weld joints 41, 43 & 44. Near the end of shift Mr. Stovall report production welding the root in on the 5 millimeter wide root gap of MUB-MA21 D/J-5 between skin-plates D & E.

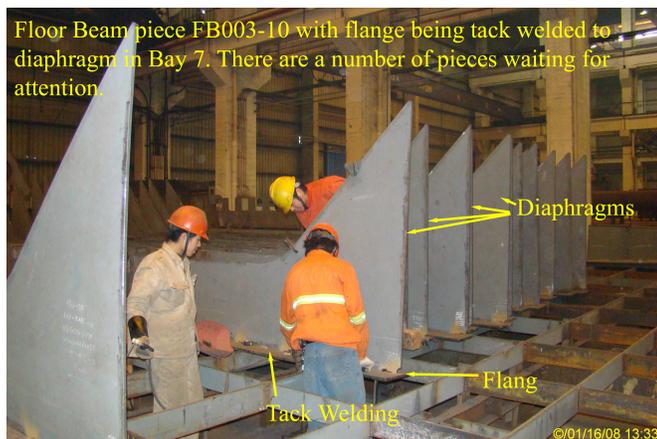
Mr. Quintana observed Zhenhua Port Machinery Company Quality Control performing ultrasonic testing in Bay 2 on portions of the complete joint penetration weld on the 77 Meter Mock-Up. Portions of welds tested included MUA-MA1-d/F-17 between skin plates D & E and 13 between E & A. Mr. Quintana also observed tack welding in Bay 3 of knife plates & T-stiffeners to various side plates, grinding of tack welds and fillet welds and fillet welding of one side plate T-stiffeners on the Gantry.

This Quality Assurance Inspector observed Zhenhua Port Machinery Company welder Ren Jin Zhu, welder identification number 044837 tack welding with the shield metal arc welding process in the horizontal position on weld FB003-10-005. Some of the essential welding variables were checked and found to be as follows; voltage 23, amperage 170, travel speed 126 millimeters per minute and preheat 49° Celsius.

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This Quality Assurance Inspector observed Zhenhua Port Machinery Company welder Wang Li, welder identification number 044772 tack welding with the shield metal arc welding process in the horizontal position on weld FB003-03-005. Some of the essential welding variables were checked and found to be as follows; voltage 22, amperage 165, travel speed 118 millimeters per minute and preheat 45° Celsius.



Summary of Conversations:

A conversation was held with Fu Yu Hong, Lu Jian Hua and Hu Gang of Zhenhua Port Machinery Company's Quality Control Department concerning the 89 Meter Mock-Up weld joint MUB-MA21 D/J-5 between skin-plates D & E. It was brought to these gentlemen's attention that quality assurance found this joint tacked up with a root opening as wide as plus 5 millimeters in places. A brief discussion was held about what the AWS D1.5 Welding Code and the contract drawings had written about the subject and Mr. Lu Jian Hua stated that he would get back with Quality Assurance when they arrived at a decision on both how to handle and what needed to be handled with this situation.

A second conversation was held with Lu Jian Hua of Zhenhua Port Machinery Company and Gang Jiao, P.E of American Bridge/Fluor concerning the 5 millimeter root opening on MUB-MA21 D/J-5. Mr. Gang stated that Mr. Jim Merrill of Quality Assurance and Mr. Steve Lawton of American Bridge/Fluor were in a meeting discussing this issue and that it was the opinion of both Zhenhua Port Machinery Company and American Bridge/Fluor that the 5 millimeter root gap was acceptable and that they wished to proceed with the welding. This Quality Assurance Inspector pointed out that it is not my place to stop any production, however that the contractor would be proceeding at their own risk and that the root gap was in actuality 0.2 millimeters larger than the stated 5 millimeters.

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: Berger, Bruce

Quality Assurance Inspector

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Reviewed By: Cochran,Jim

QA Reviewer