

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-001428**Date Inspected:** 01-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhu Zhong Hai**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:** 89 Meter Mockup**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Joe Lanz arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions during second shift. While on site the QA Inspector observed and/or discovered the following.

New Tower Shop

89 Meter Mockup Skin D to diaphragm, MUSB-MA-21:

The QA Inspector randomly observed ZPMC welding personnel welding MUSB-MA-21 skin plate D, piece mark MA-22 to diaphragm plate, piece mark p55, partial joint penetration T-joint weld number 61. The welding was performed in the 3G (vertical) position utilizing a shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal appeared to be E7018, brand name TL-508. The QA Inspector periodically observed the ZPMC QC Certified Welding Inspector Zhu Zhong Hai monitoring the welding and verifying that the welding parameters of 190 amps, 24.3 volts, 117 millimeters per minute travel speed and the minimum pre-heat of 190 Centigrade were in accordance with the Welding Procedure Specification WPS-B-T-4313-Tc-P4-1. The QA Inspector observed that preheat and welding parameters measured by the QC Inspector appeared to be within the WPS ranges. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents.

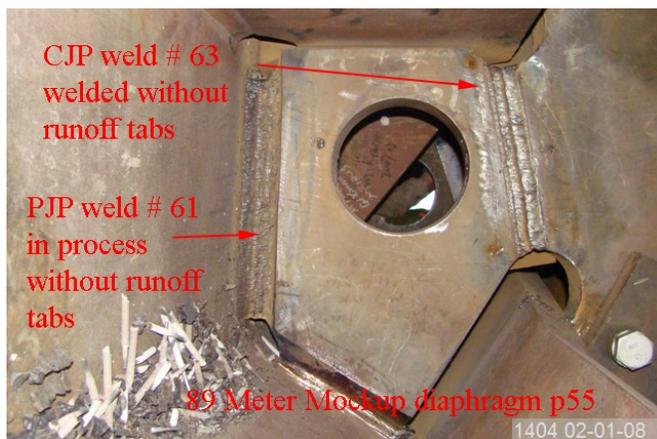
The QA Inspector randomly observed ZPMC welding personnel welding MUSB-MA-21 diaphragm, piece mark SA13 to diaphragm plate piece mark p55 complete joint penetration weld number 63. The welding was performed

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in the 3G (vertical) position utilizing a shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal appeared to be E7018, brand name TL-508. The QA Inspector periodically observed the ZPMC QC Certified Welding Inspector Zhu Zhong Hai monitoring the welding and verifying that the welding parameters of 190 amps, 24.3 volts, 117 millimeters per minute travel speed and the minimum pre-heat of 190 Centigrade were in accordance with the Welding Procedure Specification WPS-B-T-4313-Tc-P4-1. The QA Inspector observed that preheat and welding parameters measured by the QC Inspector appeared to be within the WPS ranges. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents with the following exception. The weld was performed with out runoff plates. AWS D1.5-2002, section 3.12 Weld Termination, paragraph 3.12.1 states; Welds shall be terminated at the end of a joint in a manner that will ensure sound welds. Whenever possible, this will be done by use of weld tabs placed in a manner that will duplicate the weld joint detail being welded. This issue was brought to the attention of METS QA Task Leader Mr. James Cochran and an Incident Report (TL-15) was written.

See the digital images below for detail.



Summary of Conversations:

As noted above.

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: Lanz,Joe

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer
