

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-001054**Date Inspected:** 14-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Zhi Jiang**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 Mockups**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.

Bay 2

89 Meter Mockup Subassembly MUB-MA21, Skin E:

The QA Inspector randomly observed ZPMC welding personnel ID #037996 and ID # 067081 root welding subassembly MA-38 to SB215. The welding personnel were observed welding in the 2F (horizontal) position utilizing shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, E7018, class TL-508.

The QA Inspector observed the ZPMC QC CWI Inspector Ye Yong Jin verifying that the welding parameters and the minimum pre-heat were in accordance with the Welding Procedure Specification (WPS)

WPS-B-T-4312-U-P4-2. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents.

Bay 3

OBG-Floor beams

The QA Inspector randomly observed ZPMC welding personnel tack welding floor plate SP-033 to stiffeners, weld joint #'s SP-033-01-011, SP-033-01-012, SP-033-01-013 and SP-033-01-014. The welding was performed in the 2F (horizontal) position utilizing a shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal appeared to be E7018, class TL-508. The QA Inspector observed the ZPMC QC inspector Wu Ming Kai verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure

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Specification. The QA Inspector observed that the preheat and welding parameters measured by the QC CWI Inspector appeared to be: welding parameters amps of 160. 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 repair welding floor plate SP-006 stiffener welds and stiffener cut edges, weld joint #'s SP-006-01-001 to SP-006-01-010. The welding was performed in the 2F (horizontal) position and 1G (flat) position utilizing the self shielded flux cored arc welding (FCAW-S) process. The QA Inspector observed the ZPMC QC inspector Wu Ming Kai verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification WPS-B7-2132-2. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents.

114 Meter Mockup Subassembly MUC-A65, Interior Splice assembly:

The QA inspector performed ultrasonic verification testing of 2 interior stiffeners, piece mark P920 to skin plate A65 complete joint penetration weld numbers 1 and 2. The ultrasonic testing (UT) was performed to verify the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 60 for the following scans. The base metal lamination check was performed with a 1.0"dia. round 2.25 MHz transducer. The bottom quarter and middle half shear wave scan was performed with a 0.75" x 0.625" 2.25 MHz transducer on a 70 degree angle wedge from face A and B. The top quarter shear wave scan was performed with a 0.75" x 0.625" 2.25 MHz transducer on a 45 degree angle wedge from face A and B. Scanning patterns A, B, C, and E were utilized. Following is a list of welds examined and acceptance in accordance with AWS D1.5- 2002 table 6.3 and the contract documents. The QA inspector concurred with the NDT level II technician's assessment. An Ultrasonic Test Report (TL-6027) for the welds that were tested was generated for this date.

The following digital photographs below illustrate observation of the activities being performed.



Summary of Conversations:

No Relevant conversations.

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

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for your project.

Inspected By:	Lanz,Joe	Quality Assurance Inspector
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Reviewed By:	Cochran,Jim	QA Reviewer
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