

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-002852**Date Inspected:** 05-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**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 Mock-ups**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.

77M Tower Partial Mock-Ups

Sheet No. PMU77-01, WT-101

The Quality Assurance Inspector observed that ZPMC has completed welding approximately 75% of the partial joint penetration groove weld joints. This flux cored arc welding is being applied utilizing a semi automated gantry.

Sheet No. PMU77-02, WT-32

ZPMC completed welding of this mock-up weld trial on Sunday 06-01-2008. Visual, NDT, and macro-etching still pending.

Sheet No. PMU77-03, WT-125

The Caltrans QA Inspector observed that ZPMC has completed the welding of this mock-up weld. Visual, NDT, and macro-etching still pending.

DP-609-001

The Quality Assurance Inspector performed a survey measuring the depth of excavation of 10 cracked tack weld repairs. The excavations ranged from 8 millimeters to 14 millimeters. Below is a digital photograph illustrating the measurement of the excavation utilizing digital calipers. In addition the Quality Assurance Inspector observed several areas where the base metal of the deck panel was ground approximately 3 millimeters. Caltrans Inspector

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Alfredo Acuna performed Ultrasonic Testing to the base metal due to the inaccessibility of measuring the base metal manually. Mr. Acuna tested one area and stated the 15 millimeter panel was now 11.58 millimeters in thickness. Below is a digital photograph of an excavation in effort to illustrate the amount of grinding into the base metal. Later in the shift, ZPMC relayed that all repairs to the cracked tack welds previously identified within Deck Panel DP-609-001 have been made and retested by the magnetic particle method. The previous day ABF representative Warren Buehler identified approximately 30 welds containing crack like indications that ZPMC relayed were already repaired and tested. The Quality Assurance Inspector performed magnetic particle testing to the 30 welds identified and recorded 5 that contained crack like indications. ZPMC was present during the testing and immediately marked the areas for repair.



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 (916) 227-5719, who represents the Office of Structural Materials for your project.

Inspected By: Bertlesman, Greg

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer