

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-000104**Date Inspected:** 14-Mar-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Liu Liu**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:** N/A**Summary of Items Observed:**

The CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the welding qualification testing pertinent for the welding qualification record (PQR) HP200712-3 scheduled for this project. ZPMC, welder operator Zhan Xing Jin was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-223(2)1T-1 for the PQR identified as HP200712-3 (Dual Process PQR FCAW and SAW). Base metal was designated as A-709-50-2/Z25 (Heat # 06102938N) and appeared to meet the non fracture critical impact test requirement. The root opening of the joint was approximately 6 mm. ZPMC followed AWS 5.13 the production procedure WPS using the automatic submerged arc welding (SAW) process in the flat (1G) position with the 4.8 mm diameter EH-14 electrode. The QA Inspector verified amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector recorded welding parameters for a total of 10 passes. The QA inspector observed that the welding parameters taken by Quality Control (QC) inspector Cheng Libin and ZPMC QA inspector Hu Gang appeared to be accurate and in accordance with the contract documents. ZPMC QC (CWI) Liu Liu witnessed the testing and performed visual weld inspections.

The PQR was postponed to the next day due to the weather condition.

Summary of Conversations:

The QA inspection had a conversation with American Bridge/Flour Enterprises, a JV (ABF) Welding Engineer Craig Knops. The QA inspector questioned Mr. Knops what his comments were regarding the crack like indications that were found on the 2 test coupons welded for the PQR HP200712. Mr. Knops relayed to the QA inspector that he want to see the test coupons. After verifying the linear indications on the test coupon HP-200712-2, Mr. Knops concurred that the linear indications were cracks. In addition, Mr. Knops confirmed with ZPMC that ZPMC welded over a crack located outside of the area of interest on the PQR HP200712-3.

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The QA inspector was present when Mr. Knops recommended ZPMC representative Liu Liu and Hu Gang to stop the test because ZPMC was having problems with cracking. ZPMC representative relayed to Mr. Knops that the crack discovered on the PQR HP 200712-3 was outside of the area of interest and that it was not part of the test. Mr. Knops relayed to ZPMC representative that they were missing the point and he did not want the root cracking continue in production. He wanted to resolve it by retesting the PQR HP200712-3.

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:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	McClary,David	QA Reviewer
