

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-000131**Date Inspected:** 23-Apr-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 and Huang 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:** 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) HP200778. The QA inspector had a conversation with ZPMC QA representative Hu Gang. Mr. Hu questioned the QA inspector about how ZPMC could control the travel speed. The QA inspector relayed to Mr. Hu that according with the table 5.3, AWS D1.5 2002 for shielded metal arc welding (SMAW) process the travel speed and the voltages were not essential variables, the heat input was an essential variable and the amperages has to be in accordance with the electrode manufacturer recommendations. Later, Mr. Hu relayed to the QA inspector that ZPMC technical department decided to postpone the test until further notice because ZPMC needed to confirm the preliminary WPS values with Lincoln recommendations for the use of the electrode Excalibur 9018M MR. Mr. Hu added that ZPMC was going to start with the testing of the PQR HP200786 instead.

The QA inspector was present for the welding qualification testing pertinent for the PQR HP200786 scheduled for this project. ZPMC, welding operator Zhang Xing Jin was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-2221-FB-2 for the PQR identified as HP200786. Base metal was designated as A-709-50F-2 (Heat # 7200621N) and appeared to meet the fracture critical requirements. The root opening of the joint was approximately 16 mm. ZPMC followed AWS 5.12.2 Minimum Heat Input procedure WPS using the automatic submerged arc welding (SAW) process in the flat (1G) position with the 4.8 mm diameter EH14 electrode with the S-737 flux. The QA Inspector verified amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspectors recorded welding parameters for a total of 7 passes. The QA inspectors observed that the welding parameters taken by ZPMC QA inspector Hu Gang and Huang Wei appeared to be accurate and in accordance with the contract documents.

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