

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-000170**Date Inspected:** 16-May-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** 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) HP200785 scheduled for this project. The QA inspector before the welding started verified the welding consumables for the PQR HP200785. The QA observed that the welding consumables appeared to be in general compliance with the contract documents. ZPMC, welder Han Chang Hou was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-2221-U-2 for the PQR identified as HP200785. Base metal was designated as A-709M-345 T2 (Heat # 710126N) and appeared to meet the fracture critical requirements. The root opening of the joint was approximately 16 mm. ZPMC followed AWS 5.13 Production procedure WPS using submerged arc welding (SAW) process in the flat (1G) position with the 4.8 mm diameter EH14 electrode. The QA Inspector randomly 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 ZPMC QA inspectors Huang Wei and Zhang Xin Jin and American Bridge Flour (ABF) representative Song Wemin appeared to be accurate and in accordance with the contract documents.

The PQR test was being welded on the fabrication shop on the SAW Gantry machine. The PQR 200785 was still in process at the end of the shift. ZPMC returned the remaining flux S-737 to the oven and rebaked at 350 Celsius.

Summary of Conversations:

Before the welding started, the QA inspector had a conversation with the ABF representative Song Wemin. The QA inspector brought to the attention of Mr. Song that the steel backing bar used on the PQR HP200785 had 12 mm thickness in lieu of 10 mm as per mill test report and PWPS presented by ZPMC. Mr. Song agreed and requested to ZPMC to remove the steel backing bar. ZPMC decided to fit up a second test plate with materials listed on the mill test reports. The digital photograph below shows ZPMC reinstalling the test plate HP200785.

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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
