

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-000098**Date Inspected:** 12-Mar-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1400**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 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. 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 flux cored arc welding gas (FCAW-G) process in the flat (1G) position with the 1.4 mm diameter TWE-711 electrode. The QA Inspector verified dimensions for the test coupon, amperages, voltages, travel speeds and preheats temperature. The QA inspector recorded welding parameters on 300 mm. ZPMC stopped and rejected the test coupon because the welding arc was too unstable (the ceramic backing appeared to be no arcing properly). The QA inspector had a conversation with ZPMC Testing Center Director Liu Liu. Mr. Liu relayed that the root pass with the ceramic was difficult to accomplish with the parameters established on the PQR HP200712 and the root opening of 6 mm. The welding procedure qualification was postponed to the next day because ZPMC needed to fit up another test coupon.

The digital photographs below shows the failed test coupon on the PQR HP200712-1

WELDING INSPECTION REPORT

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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
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Reviewed By:	McClary,David	QA Reviewer
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