

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-000279**Date Inspected:** 05-Jul-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:** Xu Bing**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) HP2007149 and welding procedure for the PQR HP2007148 scheduled for this project. ZPMC, welder Zhu Hai Ping was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3213 for the PQR identified as HP2007149. Base metal was designated as A-709 Grade HPS485WT2/Z (Heat # 07101250N). ZPMC followed the Production procedure WPS criteria (AWS 5.13) using the shielded metal arc welding (SMAW) process in the vertical (3G) position with the 4.0 mm diameter designated as E7018-1, brand name THJ506Fe-1. The QA Inspector verified dimensions for the test coupon, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed passes 45 through 57 (layers 21). The QA inspectors performed random verifications of the welding parameters for a total of 13 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing and ZPMC QA inspector Lu Jian Ping appeared to be accurate and in accordance with the contract documents.

ZPMC, welder Chen Ru Yang was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-3211 for the PQR identified as HP2007148. Base metal was designated as A-709 Grade HPS485WT2/Z (Heat # 07101250N). ZPMC followed the Production procedure WPS criteria (AWS 5.13) using the shielded metal arc welding (SMAW) process in the flat (1G) position with the 5.0 mm diameter designated as E7018-1, brand name THJ506Fe-1. The QA Inspector verified dimensions for the test coupon, amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspector witnessed passes 30 thru 44 (layer 19). The QA inspectors performed random verifications of the welding parameters for a total of 15 passes. The QA inspectors found that the welding parameters taken by Quality Control (QC) inspector Xu Bing and ZPMC QA inspector Lu Jian Ping appeared to be accurate and in accordance

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with the contract documents. The PQRs testing were still in process at the end of the shift.

The QA inspector had a conversation with ABF QA representative Kevin Dye. The QA inspector relayed to Mr. Dye QA's concerns about the electrodes E9018M H4R removed by ZPMC on 07/04/07 from the oven and storage at ambient temperature. The electrodes E9018M H4R in question are shown on the digital photograph below. Mr. Dye relayed that he was reporting to ABF his concerns and recommendations about how ZPMC was handling and storing SMAW electrodes (for welding A709 HPS 485W) on the test laboratory.



Summary of Conversations:

As noted on paragraph 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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