

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 #: 69.21**WELDING WITNESS REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WWR-000091**Date Inspected:** 23-Jan-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**Witness:** Procedure Qualification Record
Welding NDT**Welder Qualification**
Mechanical Testing, describe:**Fracture Critical****Index Lot #:** B41-007-07a**Witness Lot #:** B41-029-07**Bridge No:** 34-0006**Component:** Bid 52, 55 Tower and Girder**Welder:** Xia Yong Zhong**ID #:** N/A**Joint Description:** B-U2a-GF ceramic**WPS ID #:** PWPS-B-T-223(2)1T N/A**Base Metal:** A709-50-2**PQR ID #:** HP2006117-2 N/A**Thickness:** 60mm**Process:** FCAW/SAW N/A**Electrode Spec/Class:** A5.20/E71T-1/A5.17/EM12K**Positions:** 1G N/A**Backing Material:** Ceramic**CWI:** Liu Liu N/A**Average Amps:** FCAW=290.4 SAW=688**AWS Code:** D1.5-2002 N/A**Average Volts:** FCAW=28.2 SAW=32.3**Applicable Sec:** 5.13 N/A**Travel Speed:** FCAW=196.9 SAW=564.3**Heat Input:** FCAW=2.49kJ/mm SAW=2.37kJ/mm N/A**Preheat:** 161C

N/A

Summary of Items Observed:

The Caltrans Quality Assurance (QA) Inspector was present as requested to witness the retest of mechanical testing of a Procedure Qualification (PQR) test plate using both Flux Core Arc Welding (FCAW), using E71T-1 1.4mm electrode, in the 1G (flat) position and Submerged Arc Welding (SAW) using EM12K 4.8mm electrode in the 1G position, with a ceramic backing bar. The FCAW was used for the first 5 passes and the SAW was used for the remainder of the welding on the groove. The tests were performed per the AWS D1.5, Section 5.18 requirements. The testing appeared not to comply with the contract documents. Due to the Charpy Vee Notch (CVN) test which are not required by code, failed impacts

Summary of Conversations:

See Task Leader journal for this date.

Observed welding, testing or results:

is in general conformance with the contract requirements.

is not in conformance with the contract requirements.

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

WELDING WITNESS REPORT

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Materials for your project.

Inspected By:	Wright,Mark	Quality Assurance Inspector
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Reviewed By:	McClary,David	QA Reviewer
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