

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-000036**Date Inspected:** 04-Dec-2006**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

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		

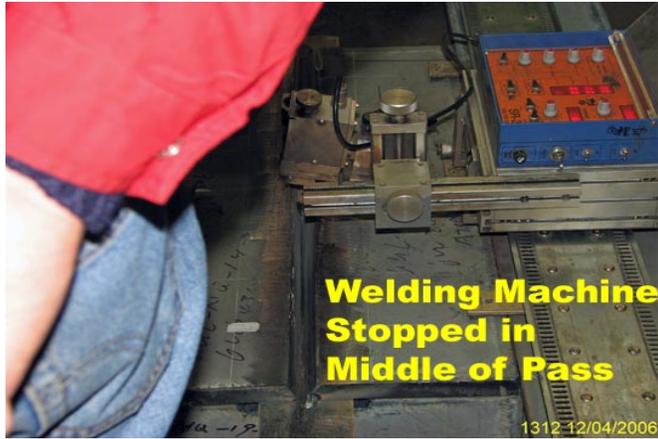
Summary of Items Observed:

Office of Structural Materials Quality Assurance Inspector (QA), David McClary observed quality control functions related to procedure qualification (PQR) testing at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

The QA Inspector observed welding of a Procedure Qualification (PQR) test plate identified as HP-2006107-2 (retest). The test was conducted using Flux Cored Arc Welding (FCAW), Hyundai Supercored 71H, electrode in the 1G (flat) position to AWS D1.5, Section 5.12.1 (Maximum Heat Input). ZPMC began the test, but were outside the +/- 10% allowable travel speed range by the second pass of the root layer. The first pass was conducted at 266.7 mm/min and the second at 355.4 mm/min, which gave them a +/- 14% difference from the average. ZPMC prepared another test plate and began the PQR again. On the second pass of a two pass root layer, the welding machine stopped in the middle of the pass because it ran out of electrode wire. The QA Inspector observed ZPMC Quality Control (QC) recording the essential variable (amps, volts, travel speed) for each pass and randomly verified the parameters using a Fluke® amperage / voltage meter and a stopwatch. The welding appeared to comply with the contract documents. Note: ZPMC performed a two pass root to ensure thorough fusion at the root. Lot Number B60-028-06 was assigned for tracking purposes. See TL-6032 for additional details.

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Summary of Conversations:

ZPMC Quality Control (QC) director Mr. Liu Liu informed the QA Inspector that the Radiographic Testing (RT) film for the 1G FCAW PQR re-test was rejected by ZPMC Quality Control for lack of fusion.

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: McClary,David

Quality Assurance Inspector

Reviewed By: Lowry,Patrick

QA Reviewer