DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000055
Date Inspected: 08-Jan-2007

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 800
OSM Departure Time: 1700
Location: Shanghai, China

CWI Name: Huang Wei

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☐ Yes	☐ No	☑ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Qualified Welders:	☐ Yes	☐ No	☑ N/A	**Weld Procedures Followed:**	☐ Yes	☐ No	☑ N/A
Approved Drawings:	☐ Yes	☐ No	☑ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☐ Yes	☑ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Bid 52, 55 Tower and Girder

Summary of Items Observed:

Office of Structural Materials Quality Assurance Inspector (QA), Mark Wright was present as requested to observe quality control functions related to procedure qualification record (PQR) testing at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item	Description	WBS	Dwg No.	Status
1				

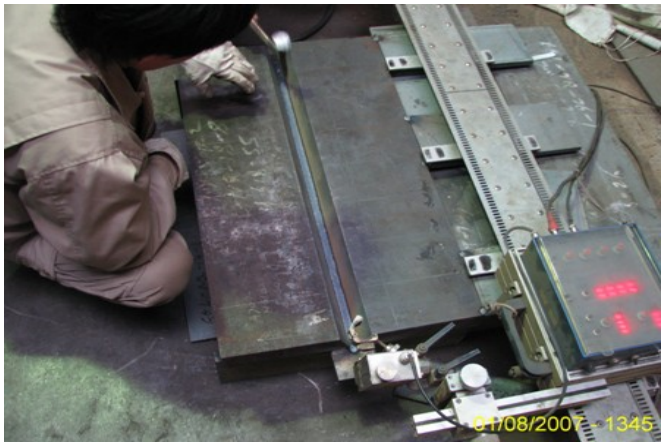
The QA Inspector observed welding of a Procedure Qualification (PQR) test plate identified as HP-2006131. The test was conducted on A709-50-2 steel using Flux Cored Arc Welding (FCAW); Hyundai Super cored 71H, electrode in the 3G (vertical) position with a root opening of 20mm to AWS D1.5, Section 5.13 (non-standard). 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 an Amprobe® amperage / voltage meter and a stopwatch. The welding appeared to comply with the contract documents. See TL-6032 for details of this test.

The Quality Control Inspector issued a lot number of B41-004-07 for the completed PQR HP2006131.

The QA Inspector observed welding of a Procedure Qualification (PQR) test plate identified as HP-2006117. The test was conducted on A709-50-2 steel using Flux Cored Arc Welding (FCAW); Hyundai Super cored 71H, 1.4mm dia. electrode in the 1G (flat) position with a root opening of 6mm to AWS D1.5, Section 5.13 (non-standard) with a ceramic backing for the first three passes and then was welded with Submerged Arc Welding (SAW) using JW-3 4. 8mm Chinese welding wire and JF-B flux. 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 an Amprobe® amperage / voltage meter and a stopwatch. The welding appeared to comply with the contract documents until the 30th pass of SAW the QA observed that the welding was outside the parameters for AWS 5.13 Essential Variables on

the Amperage.

The QC stated that they would start over with HP2006117-1. The QA observed that the welding was outside the parameters for AWS 5.13 Essential Variables on the 3rd pass for travel speed. The PQR is shown below.



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The QC stated that another plate would be prepared for further welding.

Summary of Conversations:

See Task Leader journal for this date.

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