

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-000238**Date Inspected:** 24-Jun-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**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:	Mr. Huang Wei and Mr. 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:** Procedure Qualification Record (PQR) Test**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Robert Cuellar is present at the fabrication facility of Zhenhua Port Machinery Company (ZPMC), LTD for the purpose of monitoring activities relative to the subsequent fabrication of the SFOBB Self Anchored Suspension Bridge. The following items have been observed,

The Caltrans QA Inspector observed the following personnel present, ZPMC Certified Welding Inspectors (CWI) Mr. Huang Wei and Mr. Xu Bing, ABF Representative Mr. Danny McDonald and ZPMC submerged arc welding operator Jiang Xiao Hu.

The Caltrans QA Inspector was present for the purpose of witnessing the continuation of ZPMC PQR identified as HP2007153.

ZPMCPQR HP2007153 is being attempted with the submerged arc welding (SAW) process in the flat (1G) position utilizing a 4.8 mm diameter Chinese electrode identified as JW-3, AWS Classification EM12K and a Chinese flux identified as JF-B with an AWS classification of F7A3. The steel plate is identified as A709 Grade HPS485W and is 90 mm thick. The PQR test plate assembly represents a single vee groove with steel backing. The AWS joint designation is B-U2-S. This PQR test plate assembly initially commenced on June 22nd, 2007 and has forty-one (41) weld passes applied to it prior to today's continuation. Caltrans QA Inspector Mr. Bruce Berger previously has been monitoring the activities relative to this PQR prior to today's activities. The Caltrans QA Inspector observed that the submerged arc welding machine is a Lincoln LT-7 tractor with a Lincoln Idealarc DC-1000 power supply. The CWI's listed above have been observed monitoring, preheat, inter pass temperature, voltage, amperage, travel speed and also the visual appearance of the applied filler weld passes that have been applied to the PQR test plate assembly utilizing a AC/DC Clamp Meter brand identified as a Kyoritsu 189 and a infrared thermal measuring device identified as a Sentry ST660 model, stop watch and also an artificial lighting

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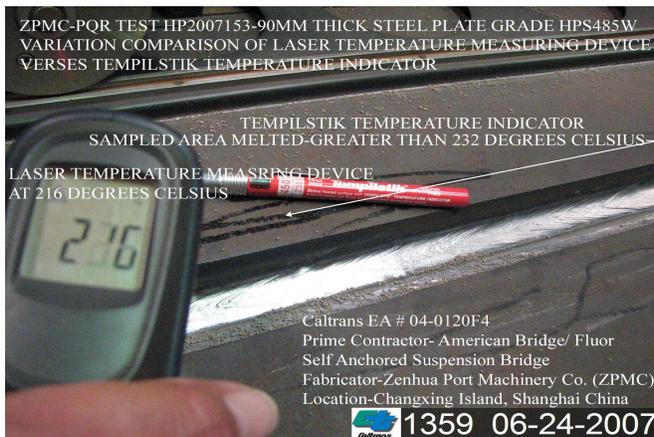
device.

The Caltrans QA Inspector also monitored and recorded the welding parameters utilizing a Fluke meter for amperage and voltage and also a stop watch for calculating travel speed. The welding parameter values observed are being recorded within a manually recorded hard copy of the welding parameter values as well as an electronic Xcel worksheet. The Caltrans QA Inspector observed a total of twenty-one (21) SAW filler passes applied to this PQR test plate, which was not completed on this date. The Caltrans QA Inspector observed that prototype manual tools were utilized for cleaning between weld passes and also minimal grinding utilizing an electrical powered grinder was used to slightly modify three filler weld passes. The Caltrans QA Inspector also observed that ABF representative Mr. Warren Buehler periodically monitored the welding parameters and the visual appearance of the applied filler weld passes. A Caltrans 6032 will be generated at the completion of this PQR test. Digital pictures that support today's observations are included below.

Item	Description	WBS	Dwg No.	Status
1	ZPMC-CWI Inspectors's Xu Bing and Huang Wei Monitoring	Welding Parameters	N/A	N/A



2	Tempilstik Temperature Indicator Verses Laser Temperature	Measuring Device	N/A	N/A
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3	ZPMC-PQR HP2007153-62 SAW Filler Weld Passes	N/A	N/A	N/A
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|---|-------------------------|-----|-----|-----|
| 4 | ZPMC-PQR Test HP2007153 | N/A | N/A | N/A |
|---|-------------------------|-----|-----|-----|
- The identified ZPMC PQR test described within this report appears to be progressing in general compliance with AWS D1.5 (2002) and the Special Provisions.

Summary of Conversations:

1) A discussion between the ABF and ZPMC representatives occurred with the Caltrans QA Inspector to address the difference of the temperature measuring devices being used. These temperature devices were recorded as a Tempilstik USA brand temperature indicator verses the laser measuring device being used by the ZPMC CWI's. The ZPMC CWI's advised the Caltrans QA Inspector that ZPMC does not have access to the USA Tempilstik brand temperature measuring indicators. The ZPMC CWI's and the ABF representative agreed to utilize the Caltrans QA Inspectors Tempilstik temperature indicator for the purpose of measuring the maximum interpass temperature of 232 degrees Celsius and the laser measuring device for lesser temperatures. 2) ZPMC representative, Mr. Xu Bing informed the Caltrans QA Inspector that the welding of this PQR test plate would continue on Monday June 25th, 2007.

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:	Cuellar,Robert	Quality Assurance Inspector
Reviewed By:	McClary,David	QA Reviewer
