

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-000219**Date Inspected:** 15-Jun-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:	None Present	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:	PQR Mechanical Testing	

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,

Item	Description	WBS	Dwg No.	Status
1	PQR Mechanical Testing	N/A	N/A	N/A

Mechanical Testing of ZPMC PQR HP200778-1

The Caltrans QA Inspector is present at the ZPMC testing center as requested by ZPMC for the purpose of observing scheduled mechanical testing of specimens for a PQR identified as HP200778-1. The Caltrans QA Inspector observed that ABF representative Mr. Kevin Dye is present along with ZPMC representative Mr. Liu Liu. The Caltrans QA Inspector observed that ZPMC has prepared the following specimens for testing as follows,

Two Reduced Section Tension Specimens-

Specimen number BBW778-1-1 was tested and recorded to have an ultimate tensile strength of 702MPa.

Specimen number BBW778-1-2 was tested and recorded to have an ultimate tensile strength of 698MPa.

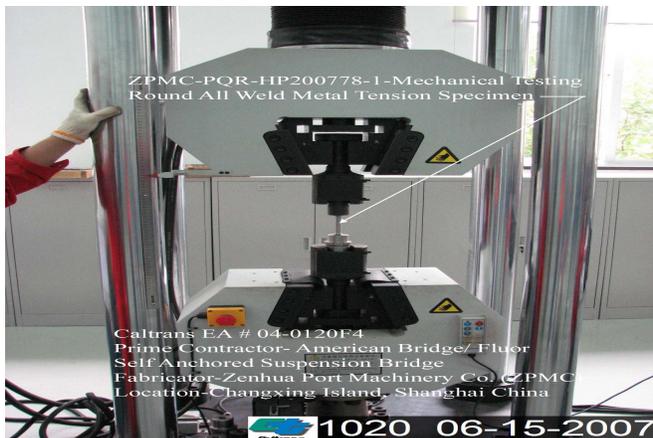
Included below is a digital picture of the observed reduced section tension specimens.

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- 2 PQR Mechanical Testing N/A N/A N/A
One Round All Weld Metal Tension Specimen
BBW778-1-3 was tested and recorded to have an ultimate tensile strength of 689MPa and yield strength of 608MPa. The elongation was measured at 27.8%. Included below is a digital picture of the observed round all weld metal tension test.



- 3 PQR Mechanical Testing N/A N/A N/A
Three Groove Weld Macroetch Specimens
Specimen numbers BBW778-1-13, BBW778-1-14 and BBW778-1-15 have been observed and recorded as having no defects and thorough fusion to the steel backing bar and between adjacent layers of weld metal and base metal. See the digital picture below of the observed macroetch specimens.

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- 4 PQR Mechanical Testing N/A N/A N/A
Five Charpy Vee Notch Test Specimens

Specimen numbers BBW778-1-4, BBW778-1-5 and BBW778-1-6, BBW778-1-7 and BBW778-1-8 have been tested at -30 degrees Celsius and were observed and recorded as having impact energy values of 110 Joules, 117 Joules, 105 Joules, 133 Joules and 129 Joules. See the digital picture below of the measured charpy vee notch specimen.



- 5 PQR Mechanical Testing N/A N/A N/A
Side Bend Test Specimens

Specimen numbers BBW778-1-9, BBW778-1-10, BBW778-1-11 and BBW778-1-12 have been observed and recorded as having no convex surface defects.

The tests identified within this report have been observed and recorded as being compliant with the test requirements as listed within the Special Provisions for HPS 485W material. ABF Representative Mr. Kevin Dye was unaware of the requirements within the Special Provisions for the tests performed above and was attempting to utilize test value requirements from AWS D1.5 (2002).

The Caltrans QA Inspector identified that ZPMC had not prepared charpy vee notch test specimens from the heat affected zone of the PQR test plate assembly as described in the Special Provisions. This discrepancy was brought to the attention of the ABF representative and also ZPMC representative Mr. Liu Liu. After reviewing this issue, Mr. Liu Liu voiced that he concurred that charpy vee notch tests are required for the heat affected zone and added that there is adequate plate material remaining from the PQR test plate assembly for preparing of such samples. Mr. Liu Liu added

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that charpy vee notch testing of heat affected zone samples would probably be conducted on Monday June 18th, 2007

Summary of Conversations:

As recorded within the last paragraph of the Summary of Items Observed.

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
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Reviewed By:	McClary,David	QA Reviewer
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