

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



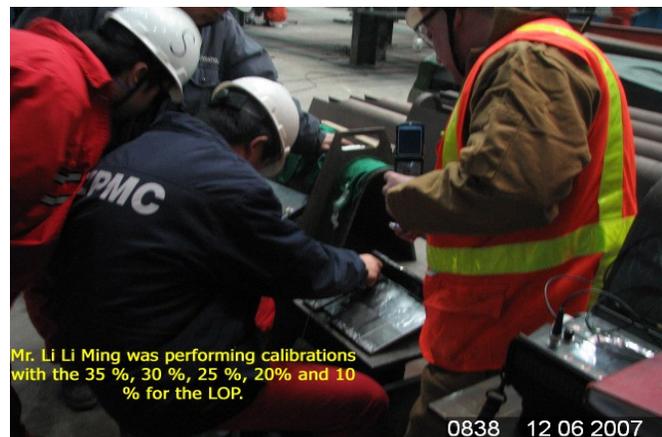
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001019**Date Inspected:** 06-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**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:** Fu Yu Hong**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:** OBG Second Weld Trial**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present witnessing and performing 100% ultrasonic testing (UT) on the partial penetration joint (PJP) for the second weld trial scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge on Bay # 1. ABF representatives Mr. Art Peterson and Mr. David LaRue, and ZPMC representatives Mr. Xue Hairong and Li Li Ming were at location performing UT verifications. The photographs below show ABF and ZPMC representatives during the UT verifications and the calibration test blocks with 10 %, 20%, 25 %, 30% and 35% Lack of penetration (LOP).



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Mr. Li Li Ming was performing calibrations with the 35 %, 30 %, 25 %, 20% and 10 % for the LOP.

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	Y locations	Locato n	Recorded by QA (mm)	QC Max. and Min. LOP values (mm)	Recorded by ZPMC/ABF (mm)	QA Max and Min Lop values	Deviation QA/QC (mm)	Error QC/QA (mm)	
Weld # 10	2120 to 2125	1	2.57		2.57		0	0	
	1810 to 1818	2	2.65		2.65		0	0	
	1850 to 1858	3	3.35		3.35		-0.275	0.275	
	185 to 191	4	2.5		2.5		0	0	
	7910 to 7913	5	2.75		2.75		-0.13	0.13	
	1825 to 1859	6	2.69		2.69		-0.138	0.138	
	1905 to 1909	7	3.09		3.09		0.279	0.279	
	2090 to 2101	8	2.58		2.58		0.018	0.018	
	2130 to 2144	9	2.79		2.569		0.179	0.179	
	2180 to 2191	10	2.69		2.66		0.17	0.17	
Weld # 1	2515 to 2532	11	2.94		3.27		0.33	0.33	
	2735 to 2743	12	2.63		2.669		0.138	0.138	
	2770 to 2805	13	2.64		2.66		0.02	0.02	
	3110 to 3125	14	3.12		3.11		-0.01	0.01	
	3715 to 3728	15	2.62		2.63		0.01	0.01	
	3810 to 3833	16	3.08		3.085		-0.005	0.005	
	4325 to 4337	17	2.82		2.85		0.03	0.03	
	4925 to 4930	18	3.27		3.27		-0.3	0.3	
	5520 to 5532	19	3		2.74		-0.26	0.26	
	5800 to 5853	20	3.27		3.27		-0.03	0.03	
Weld # 3	6020 to 6038	21	3.2		2.89		-0.02	0.02	
	6115 to 6128	22	3.09		3.17		0.08	0.08	
	6210 to 6222	23	2.7		2.74		0.04	0.04	
	6300 to 6318	24	2.7		2.74		0.04	0.04	
	6550 to 6562	25	3.01		3.0		-0.01	0.01	
	7000 to 7022	26	3.02		3.11		0.09	0.09	
	7800 to 7815	27	3.27		3.21		-0.06	0.06	
	7915 to 7913	28	3.27	Max 7.6	2.35	Max 1.42	-0.9	0.9	
	8115 to 8115	29	3.09	Min 2.28	2.91	Min 2.482	-0.18	0.18	
	9100 to 9110	30	3.51		2.84		-0.67	0.67	
Weld # 6	9570 to 10000	31	3.21		3.24		0.03	0.03	
	9970 to 9980	32	2.85		2.864		-0.008	0.008	
	9110 to 9140	33	2.88		2.83		-0.058	0.058	
	6615 to 6614	34	2.53		2.482		-0.448	0.448	
	6614 to 662	35	2.85		2.85		-0.269	0.269	
	6520 to 6537	36	2.65		2.65		0	0	
	2530 to 2548	37	2.65		2.65		0	0	
	45 to 65	38	2.8		3.42		0.62	0.62	
	1250 to 1270	39	2.88		2.76		-0.12	0.12	
	1250 to 1270	40	2.6		2.61		0.01	0.01	
Weld # 9	3110 to 3130	41	2.54		2.65		0.106	0.106	
	5500 to 5515	42	2.6		2.62		0.02	0.02	
	5810 to 5820	43	2.25		2.68		0.43	0.43	
	7100 to 7200	44	2.37		2.65		0.28	0.28	
	7405 to 7425	45	2.64		2.64		0.28	0.28	
	7905 to 7925	46	2.3		2.68		0.38	0.38	
								0.216950	0.144360
								Statistical Deviation From the Mean QC/QA Error	Mean Error Between QC/QA

Item Description WBS Dwg No. Status

1 UT verifications on the PJP for the Second Weld Trial

The QA Inspector was performing 100% ultrasonic testing (UT) evaluation after Mr. Art Peterson on the partial penetration joint (PJP), at the 12 mm U-rib # U-75 weld joint # 5. The QA inspector concurred with the locations, however for sizing see the data sheet above from locations # 36 thru 38.

The QA inspector performed 100% UT evaluation after Mr. David LeReu and Art Peterson on the partial penetration joint (PJP) at the 12 mm U-rib # U-73 weld joint # 1. The QA inspector found 4 locations with Lop that were not recorded by ABF. The QA inspector had a conversation with Mr. David LeReu and Mr. Art Peterson. The QA inspector brought to the attention of ABF representatives that UT indications were missed by the ABF representatives. After ABF representatives re-evaluated the locations found by the QA inspector, ABF concurred that the indications were missed. The table above show the data that ABF and Caltrans representative found at the weld # 1 locations 6 to 31. The testing was still in progress at the end of the shift.

Summary of Conversations:

As noted above.

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:	Acuna, Alfredo	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
