

**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-008837**Date Inspected:** 28-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** CWI: Liu Yang**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:** Tower components**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Dilip Chakrabarti was present during the times noted above for observations relative to the work being performed.

Bay# 10- Tower Assembly:

This QA Inspector randomly observed the following work in progress:

**Magnetic Particle Testing (MT):**

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL-6028 MT report on this date.

The member and the weld designations are as follows:

Sl # Section # Weld # Green Tag # Location

1. SSTL3-1 B/K 82B 9817 NA

2. SSTL3-1 B/K 19 NA NA

3. SSTL3-1 C/K 22 NA NA

**Final VT:**

This QA inspector performed Final Visual Testing (FVT) of entire welded area, previously tested and accepted by ZPMC Quality Control personnel of the member and weld designated are as follows:

Sl # Section # Weld # Green Tag # Location

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1. SSTL3-1 B/K 19 NA NA
2. SSTL3-1 C/K 22 NA NA
3. SSTL3-1 C/K 102 NA NA
4. SSTL3-1 D/K 24 NA NA
5. SSTL3-1 F/K 17 NA NA
6. SSTL3-1 F/K 95 NA NA
7. SSTL3-1 G/K 24 NA NA
8. SSTL3-1 G/K 113 NA NA
9. SSTL3-1 H/K 18 NA NA
10. SSTL3-1 H/K 94 NA NA
11. SSTL3-1 I/K 22 NA NA
12. SSTL3-1 I/K 113 NA NA
13. SSTL3-1 J/K 18 NA NA
14. SSTL3-1 B/K 82B 9817 NA

**FCAW Process:**

Welding of weld Joint# 2A located on PCMK NSD1 SPSA3-54. Welder is identified as 053896. ZPMC QC is identified as Lu Wei Chao. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-2232-B-U5-F.

Welding of weld Joint# 1A located on PCMK NSD1 SPSA3-52. Welder is identified as 040343. ZPMC QC is identified as Lu Wei Chao. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-2232-B-U5-F.

Tack welding of weld Joint# 26 located on PCMK NSD1 FASA4-1 B/E-2. Welder is identified as 250253. ZPMC QC is identified as Yuan Hai Gang. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4312-TC-P4-2.

Tack welding of weld Joint# 5 located on PCMK NSD1 FASA4-1 B/E-1. Welder is identified as 052889. ZPMC QC is identified as Yuan Hai Gang. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4312-TC-P4-2.

Tack welding of weld Joint# 16 located on PCMK NSD1 FASA4-1 C/E. Welder is identified as 040586. ZPMC QC is identified as Yuan Hai Gang. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4312-TC-P4-2.

Tack welding of weld Joint# 16 located on PCMK NSD1 FASA4-1 C/E. Welder is identified as 040475. ZPMC QC is identified as Yuan Hai Gang. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4312-TC-P4-2.

**Bay# 11- Tower Assembly:**

This QA Inspector randomly observed the following work in progress:

**FCAW Process:**

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Welding of weld Joint# 84B located on PCMK WSD1 FASA4-2 A/E-21. Welder is identified as 040212. ZPMC QC is identified as Zhan Bo. The welding variables recorded by QC appeared to comply with the specified WPS no. B-T-4332-TC-P4-F.

Unless otherwise noted, all work observed on this date appeared to be generally comply with applicable contract documents.

**Summary of Conversations:**

During random Inspection in Bay# 11 this QA Inspector observed that the repair for weld joint# ESTL3-4 B/K-83A/B was being prepared in the presence of ZPMC QC Zhang Bo. After this QA Inspector verified the Critical Welding Report (CWR)# T-CWR-210 and the weld map, it appeared that defect location# 4, as confirmed by the ZPMC QC and the location of the excavation did not match as detailed in the CWR and attached UT report.

This QA Inspector asked ZPMC QC representative Shen Xue Jun why the location of the where the critical weld repair location does not match the location indicated on the ultrasonic inspection report. Shen Xue Jun informed this QA Inspector that he does not know why the locations do not match and that ZPMC will not perform any welding repairs at this location until ZPMC revises the critical weld repair document.

WELD IDENTIFICATION 焊缝材料编号	INDICATION NO. 指示号	PROBE ANGLE 探头角度	FRONT FACE 正面	LED (dB)	DECIBELS 分贝				DISCONTINUITY 不连续线				Discontinuity Evaluation 缺陷评价	Remarks 备注	
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	Front X 前X			Front Y 前Y
ESTL3-4B/K-83A/B	1R2	45	A	1	38	34	4	0	10	116	53	-10	12340	REJ	100%
	2R2	45	A	3	44	38	10	0	230	142	75	0	30000	REJ	100%
	3R2	45	B	1	40	34	0	0	270	104	74	-15	8195	REJ	100%
	4R2	45	B	2	40	34	0	0	450	140	81	0	2200	REJ	100%
	5R2	45												ACC	100%
	6R2	45												ACC	100%
	7R2	45												ACC	100%
	8R2	45												ACC	100%

Defect#4 starts @ 2300mm from Y ref and length 450mm



**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 Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Chakrabarti,Dilip Kumar	Quality Assurance Inspector
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<b>Reviewed By:</b>	Clifford,William	QA Reviewer
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