

**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-010753**Date Inspected:** 13-Nov-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:** See below**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 Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW welding of weld joint SSD1-SPSA4-15-2B located on PCMK south tower, lift 4, skin A, internal splice plate. Welder was identified as 053869. ZPMC QC was identified as Li Ming (QC1). The welding variables recorded by QC1 appeared to comply with WPS-B-T-2232-B-U5-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Kong Xian Hui.

FCAW welding of weld joint NSD1-SPSA4-15-2B located on PCMK north tower, lift 4, skin A, internal splice plate. Welder was identified as 050041. ZPMC QC was identified as CWI Li Ming (QC1). The welding variables recorded by QC1 appeared to comply with WPS-B-T-2232-B-U5-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Kong Xian Hui.

SMAW welding of weld joint ND1-A6002-2-27 located on PCMK north tower, strut. Welder was identified as 040582. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-4113-1.

SMAW welding of weld joint ND1-A6002-2-30 located on PCMK north tower, strut. Welder was identified as

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052930. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2113-1.

### Bay 11

This QA Inspector randomly observed the following work in progress in Bay 11:

FCAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 120M and 120.5M elevations. Welder was identified as 040713. ZPMC QC was identified as CWI Zhang Zhi Neng (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2231-C-U2-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

SAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 122M and 126.5M elevations. Welder was identified as 040772. ZPMC QC was identified as QC2.

The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

SAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 126.5M and 129M elevations. Welder was identified as 047304. ZPMC QC was identified as QC2.

The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

SAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 129M and 131M elevations. Welder was identified as 042195. ZPMC QC was identified as QC2.

The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

SAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 131M and 134M elevations. Welder was identified as 202756. ZPMC QC was identified as QC2.

The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

SAW welding of weld joint ESTL4-2B/L-57A located outside PCMK east tower, lift 4, skin C to skin D, between approximately 134M and 136M elevations. Welder was identified as 040634. ZPMC QC was identified as QC2.

The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Luo Lai Quan.

### Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW welding of weld joint SSTL4-1B/L-3A located outside PCMK south tower, lift 4, skin A to skin E corner between 114M and 115M elevations. Welder was identified as 052075. ZPMC QC was identified as CWI Wan Wen Zhong (QC3). Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tian Liang, who was not a CWI. The welding variables recorded by QC3's assistant appeared to

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comply with WPS-B-T-2232-C-U2-F. The welder discovered porosity in the weld and called for QC3. The weld area exhibiting porosity was gouged out and ground smooth. A windscreen was erected near the work area and the welding operation resumed. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Yang Ye Heng.

FCAW welding of weld joints SSSL4-1B/L-2A located outside PCMK south tower, lift 4, skin D to skin E corner between 120M and 120.5M elevations. Welder was identified as 053116. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2231-C-U2-F.

SAW welding of weld joint SSSL4-1B/L-2A located outside PCMK south tower, lift 4, skin D to skin E, between approximately 118M and 120M elevations. Welder was identified as 040460. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

SAW welding of weld joint SSSL4-1B/L-2A located outside PCMK south tower, lift 4, skin D to skin E, between approximately 121.5M and 129M elevations. Welder was identified as 040489. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

SAW welding of weld joint SSSL4-1B/L-2A located outside PCMK south tower, lift 4, skin D to skin E, between approximately 129M and 136.5M elevations. Welder was identified as 207745. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

SAW welding of weld joint SSSL4-1B/L-2A located outside PCMK south tower, lift 4, skin D to skin E, between approximately 137.5M and 140.5M elevations. Welder was identified as 050295. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2.

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

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

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<b>Inspected By:</b>	Goulet,George	Quality Assurance Inspector
<b>Reviewed By:</b>	Dawson,Paul	QA Reviewer

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