

**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-006742**Date Inspected:** 15-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

|                                    |                               |    |     |                                  |     |    |     |
|------------------------------------|-------------------------------|----|-----|----------------------------------|-----|----|-----|
| <b>CWI Name:</b>                   | Wu Zhifeng, Tu Jun, Liu Zhong |    |     | <b>CWI Present:</b>              | Yes | No |     |
| <b>Inspected CWI report:</b>       | Yes                           | No | N/A | <b>Rod Oven in Use:</b>          | Yes | No | N/A |
| <b>Electrode to specification:</b> | Yes                           | No | N/A | <b>Weld Procedures Followed:</b> | Yes | No | N/A |
| <b>Qualified Welders:</b>          | Yes                           | No | N/A | <b>Verified Joint Fit-up:</b>    | Yes | No | N/A |
| <b>Approved Drawings:</b>          | Yes                           | No | N/A | <b>Approved WPS:</b>             | Yes | No | N/A |
|                                    |                               |    |     | <b>Delayed / Cancelled:</b>      | Yes | No | N/A |

**Bridge No:** 34-0006**Component:** Tower and OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 7

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 7:

Fitting and SMAW tack welding of weld joints SP201-015-001, 002 located on PCMK side plate. Welder was identified as 201725. ZPMC QC was identified as CWI Wu Zhifeng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Tai, who was not a CWI, and ZPMC CAWI Huang Min. The welding variables recorded by QC1 and his assistants appeared to comply with WPS-B-P-2112.

Fitting and SMAW tack welding of weld joints FB202-016-001, 002 located on PCMK floor beam. Welder was identified as 203206. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Tai, who was not a CWI, and ZPMC CAWI Huang Min. The welding variables recorded by QC1 and his assistants appeared to comply with WPS-B-P-2112.

Fitting and SMAW tack welding of weld joints SP206-016-005, 006 located on PCMK side plate. Welders were identified respectively as 203204, 215259. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Tai, who was not a

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CWI, and ZPMC CAWI Huang Min. The welding variables recorded by QC1 and his assistants appeared to comply with WPS-B-P-2112.

### Bay 10

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

FCAW welding, using the northwest gantry, of weld joints NSD1-FBSA3-3A/C-26, 27 located on PCMK north tower, lift 3, skin B. Welders were identified respectively as 057266, 053869. ZPMC QC was identified as CWI Tu Jun (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2332-Tc-P5-F.

SMAW welding of weld joints SSSL3-1B/K-56, 56 located on PCMK south tower, lift 3, skin D. Welders were identified respectively as 040256, 040453. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Li Peng Fei, who was not a CWI. The welding variables recorded by QC2 and his assistant appeared to comply with WPS-B-T-2314-Tc-P5.

FCAW welding of weld joints SSD1-TL5C/L-109, 201 located on PCMK south tower, lift 2, skin E at the 53M diaphragm. Welders were identified respectively as 201825, 040330. ZPMC QC was identified as CWI Liu Zhong An (QC3). Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Hui Gong, who was not a CWI. The welding variables recorded by QC3 and his assistant appeared to comply with WPS-B-T-4333-Tc-P4-F.

FCAW welding of weld joint SSD1-TL5H/L-3 located on PCMK south tower, lift 2, skin E at the 77M diaphragm. Welder was identified as 203977. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Hui Gong, who was not a CWI. The welding variables recorded by QC3 and his assistant appeared to comply with WPS-B-T-4333-Tc-P4-F. Also at this location and appearing to be monitoring the welding was ABF Representative Li Nan.

SMAW welding of weld joint SSD1-TL5F/L-59 located on PCMK south tower, lift 2, skin E, at the 65M diaphragm. Welder was identified as 052930. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Hui Gong, who was not a CWI. The welding variables recorded by QC3 and his assistant appeared to comply with WPS-B-T-3212-B-U2a-1. Also at this location and appearing to be monitoring the welding was ABF Representative Li Nan.

### Bay 11

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

FCAW welding of weld joint ESD1-SA300B/F-6 located on PCMK east tower, lift 2, skin A. Welders were identified as 067499, 067036. ZPMC QC was identified as CWI You Qi Guo (QC4). Assisting QC4 at this location and appearing to be monitoring the welding and recording data was ZPMC CAWI Inspector Liu Dao Feng. The welding variables recorded by QC4 and his assistant appeared to comply with WPS-B-T-2332-Tc-P4-F.

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SAW welding of weld joints WSDL3-FBSA4-2A/C-9A located on PCMK west tower, lift 4, skin B. Welder was identified as 047304. ZPMC QC was identified as QC4. The welding variables recorded by QC4 appeared to comply with WPS-B-T-2221-B-U3c-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, and this QA Inspector, George Goulet, asked each QC if all the welding variables observed by him appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. Each QC showed this QA Inspector, George Goulet, that he was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all he observed did appear to comply, except in Bay 7 where ZPMC QC Inspector Wang Tai showed this QA Inspector, George Goulet, that he was using a laser infrared sensor.

### 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 Eric Tsang, 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>  | Carreon,Albert | QA Reviewer                 |

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