

**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-010864**Date Inspected:** 09-Dec-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 and 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:

SMAW welding of weld joints ED1-STSA3-2-109M-2-12, 13 located on PCMK east tower, lift 3, strut. Welder was identified as 057259. ZPMC QC was identified as CWI Gong Liang Zhu (QC1). The welding variables recorded by QC1 appeared to comply with WPS-B-T-2112. Also at this location and appearing to be monitoring the welding operation was ABF Representative Xie Yan.

SMAW welding of weld joints ED1-STSA3-2-99M-2-41, 42 located on PCMK east tower, lift 3, strut. Welder was identified as 040268. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2113. Also at this location and appearing to be monitoring the welding operation was ABF Representative Xie Yan.

SMAW welding of weld joints ED1-STSA3-2-99M-2-43, 44 located on PCMK east tower, lift 3, strut. Welder was identified as 040267. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2113. Also at this location and appearing to be monitoring the welding operation was ABF Representative Xie Yan.

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FCAW welding of weld joint NSTL4-3K/L-112 located inside PCMK north tower, lift 4, skin A, fit lug to top of 143M double diaphragm. Welder was identified as 050041. ZPMC QC was identified as CWI Tu Jun (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Wang Hao, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-4333-TC-P4-F.

FCAW welding of weld joint NSTL4-3K/L-41 located inside PCMK north tower, lift 4, skin A, fit lug to bottom of 143M double diaphragm. Welder was identified as 052075. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Wang Hao, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-4333-TC-P4-F.

FCAW welding of weld joints NSTL4-3I/L-49, 50 located inside PCMK north tower, lift 4, skin A, fit lug to bottom of 135M double diaphragm and to skin A stiffener. Welder was identified as 201825. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Wang Hao, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-4333-TC-P4-F for weld 50 and WPS-B-T-2333-TC-P4-F for weld 49.

FCAW welding of weld joints NSTL4-3I/L-104, 105 located inside PCMK north tower, lift 4, skin A, fit lug to top of 135M double diaphragm and to skin A stiffener. Welder was identified as 053116. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Wang Hao, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-T-4333-TC-P4-F for weld 105 and WPS-B-T-2333-TC-P4-F for weld 104.

FCAW welding of weld joints NSTL4-3G/L-48, 46 located inside PCMK north tower, lift 4, skin A, fit lug to bottom of 127M double diaphragm and to skin A stiffener. Welder was identified as 054069. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-4333-TC-P4-F for weld 48 and WPS-B-T-2333-TC-P4-F for weld 46.

FCAW welding of weld joints NSTL4-3G/L-114, 112 located inside PCMK north tower, lift 4, skin A, fit lug to top of 127M double diaphragm and to skin A stiffener. Welder was identified as 057244. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-4333-TC-P4-F for weld 105 and WPS-B-T-2333-TC-P4-F for weld 104.

SMAW repair welding of weld joint SSTL4-1B/L-5B located inside PCMK south tower, lift 4, skin B to skin C, at approximately 114M to 115M elevations. Welder was identified as 053869. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Gao Zhi Chun, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-345-SMAW-2G(2F)-repair.

SMAW repair welding of weld joint SSTL4-1B/L-5B located inside PCMK south tower, lift 4, skin B to skin C, at approximately 125M to 126M elevations. Welder was identified as 040343. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Gao Zhi Chun, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with

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WPS-345-SMAW-2G(2F)-repair.

Blast Shop #1

This QA Inspector and Caltrans QA Inspector Paul Dawson performed random visual inspections of the OBG internal ceiling from the weld seam from panel point 50 to panel point 52 of OBG Segment 7BW as per ZPMC request number 2180, Document No. PR008, Rev. 03. ZPMC had recently completed grit blasting of these areas and the steel surfaces are now mostly free of rust oxide and other contaminants that had previously obscured portions of the plate and weld surfaces. This QA Inspector visually observed approximately 50 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections. The areas were marked with colored chalk and ZPMC had several workers using grinders to remove the visually unacceptable areas and ZPMC had assigned a magnetic particle test (MT) inspector to perform MT of the arc strike removal areas.

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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