

**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-012689**Date Inspected:** 19-Mar-2010**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 OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA 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 NSTL4-3D/L-1 located inside PCMK north tower, lift 4, skins C/D corner angle plate butt weld connection near 116M single diaphragm. Welder was identified as 040533. ZPMC QC was identified as CWI Du Zhi Qun (QC1). The welding variables recorded by QC1 appeared to comply with WPS-B-T-2233-B-U2a-F-1. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Nan.

**Bay 11**

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

SMAW welding of run-off plates at weld joint ED1-STSA4-6-143M-2-3A located on PCMK east tower, lift 4. Welder was identified as 208754. ZPMC QC was identified as ZPMC CWI Yu Dong Ping (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-4113-1 and WPS-B-T-4211-B-U3b-1. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Xie Yan.

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### Heavy Dock

This QA Inspector randomly observed the following work in progress on the Heavy Dock:

FCAW welding of weld joint NSD1-SA76F/H-29 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 057244. ZPMC QC was identified as ZPMC CWI Gong Liangzhu (QC3). The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint NSD1-SA76F/H-57 located outside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 255455. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke.

FCAW welding of weld joint NSD1-SA76F/H-15 located inside PCMK north tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 053869. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke.

FCAW welding of weld joint NSD1-SA17F/G-27 located inside PCMK north tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 040533. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke.

FCAW welding of weld joint WSD1-SA294F/G-54 located outside PCMK west tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 068493. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representatives Li Ke Wei.

FCAW welding of weld joint WSD1-SA294F/G-49 located outside PCMK west tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 068859. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representatives Li Ke Wei.

FCAW welding of weld joint WSD1-SA295B/E-27 located outside PCMK west tower, lift 1 base, skin D, shear plate stiffener to connection plate. Welder was identified as 070022. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representatives Li Ke Wei.

FCAW welding of weld joint WSD1-SA225F/H-44 located outside PCMK west tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 066481. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

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FCAW welding of weld joint WSD1-SA225F/H-38 located outside PCMK west tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 068919. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint ESD1-SA296B/E-6 located outside PCMK east tower, lift 1 base, skin D, shear plate stiffener to connection plate. Welder was identified as 066484. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint ESD1-SA227F/H-11 located outside PCMK east tower, lift 1 base, skin E, shear plate stiffener to connection plate. Welder was identified as 068206. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint ESD1-SA294F/G-60 located outside PCMK east tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 066155. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint ESD1-SA294F/G-54 located outside PCMK east tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 040713. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint SSD1-SA17F/G-62 located outside PCMK south tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 054069. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

FCAW welding of weld joint SSD1-SA17F/G-42 located outside PCMK south tower, lift 1 base, skin C, shear plate stiffener to connection plate. Welder was identified as 044480. ZPMC QC was identified as QC3. Assisting QC3 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yang Mingming, who was not a CWI. The welding variables recorded by QC3's assistant appeared to comply with

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WPS-B-T-2333-TC-P4-F. Also present at this location and appearing to be monitoring the welding related operations was ABF Representative Li Ke Wei.

ABF Representative Li Ke Wei informed this QA Inspector that the tower access elevator was being used to remove rubbish from the tower lift 1/lift 2 joint area and drilling operations were being conducted on the 18M level and this was the only work, except as noted above, being performed on the tower assemblies.

OBG segments 5E, 5W, and CB4 were located on the ship moored to the end of the heavy dock and OBG segments CB5 and CB6 were located near the end of the heavy dock. No work was observed being performed on either OBG segments 5E, 5W, CB4, CB5, or CB6, although ZPMC workers were performing hot work on the stanchions alongside segments 5E and 5W.

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 Skyler Guest, 150-0042-2360, 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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