

**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-010700**Date Inspected:** 11-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 and OBG 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:

SAW welding of weld joint SSSL4-1B/L-4A located outside PCMK south tower, lift 4, skin A to skin B, between approximately 128M and 136M elevations. Welder was identified as 207745. ZPMC QC was identified as CWI Wan Wen Zhong (QC1). The welding variables recorded by QC1 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 Yang Ye Heng.

SAW welding of weld joint SSSL4-1B/L-5A located outside PCMK south tower, lift 4, skin A to skin B, between approximately 138M and 144M elevations. Welder was identified as 040252. ZPMC QC was identified as QC1. The welding variables recorded by QC1 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 Yang Ye Heng.

SAW welding of weld joint SSSL4-1B/L-5A located outside PCMK south tower, lift 4, skin B to skin C, between approximately 114.5M and 120M elevations. Welder was identified as 040460. ZPMC QC was identified as QC1. The welding variables recorded by QC1 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 Yang Ye Heng.

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SAW welding of weld joint SSTL4-1B/L-5A located outside PCMK south tower, lift 4, skin B to skin C, between approximately 121.5M and 129M elevations. Welder was identified as 0503060. ZPMC QC was identified as QC1. The welding variables recorded by QC1 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 Yang Ye Heng.

### Bay 2

This QA Inspector proceeded to Bay 11 in response to ZPMC Inspection Notification # 4608 for MT inspection of the following:

This QA Inspector performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The member is identified as FB3052-001. The weld designations reviewed were 005, 006, 007, 008, 015, 016, 017, 018.

This QA Inspector performed random VT of the area previously tested and accepted by ZPMC Quality Control personnel on the member is identified as FB3052-001. This QA Inspector observed 2 unmarked vertical welds exhibiting washout of base metal in excess of 6mm at the top ends of the welds. By reviewing the ZPMC weld map for this member, it appeared to this QA Inspector that these welds were designated as 022, 023. However, neither of the 2 welds was listed on the above noted ZPMC Inspection Notification # 4608. This QA Inspector also observed overlap in the weld designated as 025. This QA Inspector determined from the above noted conditions that member FB3052-001 did not comply with AWS D1.5 acceptance criteria. See photos below.

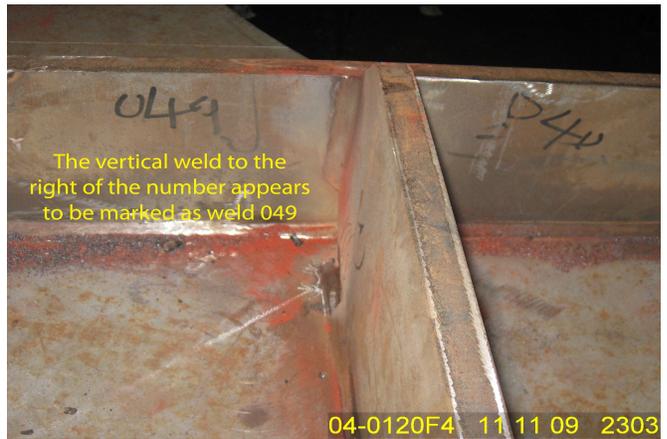
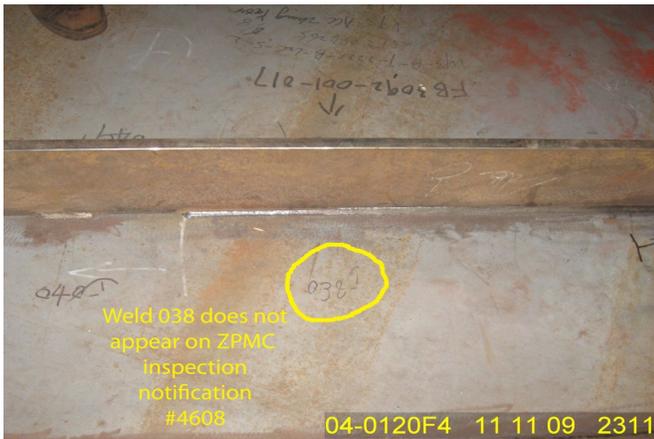
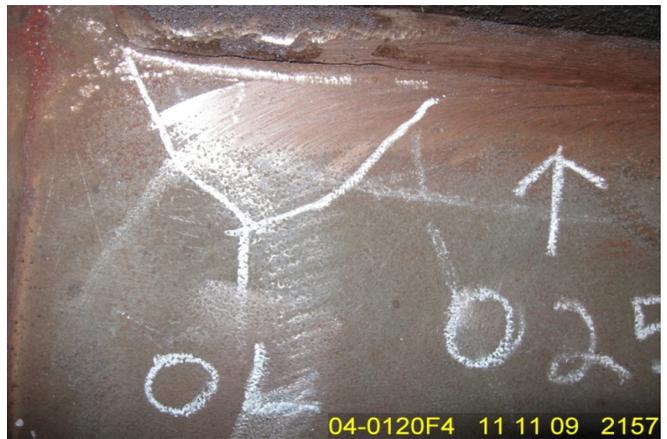
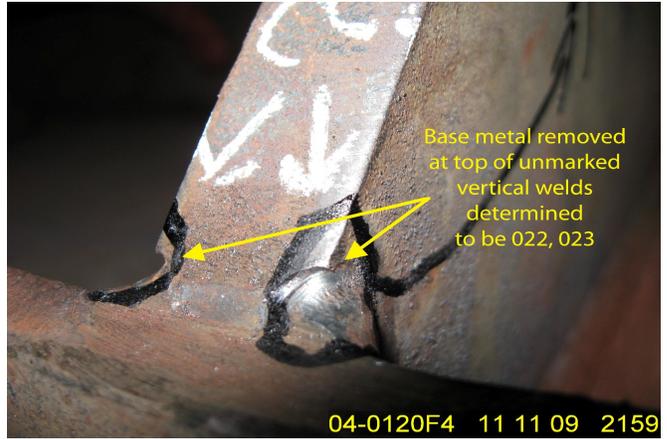
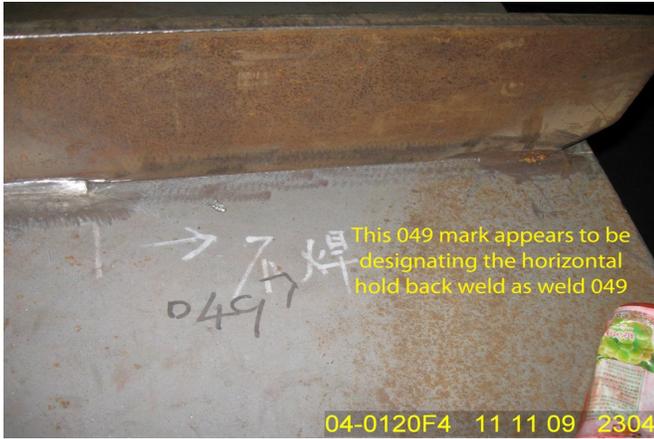
This QA Inspector performed random VT of the area previously tested and accepted by ZPMC Quality Control personnel on the member is identified as FB3092-001. This QA Inspector observed a weld marked as 038 which did not appear on ZPMC Inspection Notification # 4608. This QA Inspector also observed 2 different welds, 1 vertical and 1 horizontal, marked on the member as 049. This QA Inspector also observed overlap in the various welds on this member and listed on ZPMC Inspection Notification # 4608. This QA Inspector determined from the above noted conditions that member FB3092-001 did not comply with AWS D1.5 acceptance criteria. See photos below.

This QA Inspector performed random VT of the area previously tested and accepted by ZPMC Quality Control personnel on the member is identified as FB3012-001. This QA Inspector observed overlap in the various welds on this member and listed on ZPMC Inspection Notification # 4608. This QA Inspector determined from the above noted conditions that member FB3012-001 did not comply with AWS D1.5 acceptance criteria. See photos below.

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

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## 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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**Inspected By:** Goulet, George

Quality Assurance Inspector

**Reviewed By:** Dawson, Paul

QA Reviewer