

**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-015967**Date Inspected:** 28-Jul-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:

Heat straightening of PCMK OBG SP3083A, side plate. QC was identified as ZPMC CWI Qiu Wen (QC1). Assisting QC1 at this location and appearing to be monitoring the heat treating and recording data was ZPMC QC Sun Tian Liang (QCA1), who was not a CWI. When this QA Inspector arrived, no ZPMC QC was in the vicinity and the area being heated with an oxy-fuel torch was glowing cherry red. A 10 ton weight was positioned on the plate immediately adjacent to the area being heated. After approximately 10 minutes, QCA1 arrived and presented this QA Inspector with HSR1(B)-8858. Heat treatment observed by this QA Inspector and recorded by QCA1 did not appear to comply with ZPMC Welding Quality Control Plan (WQCP) Section 6.5 or Section 11.2.5. No ZPMC personnel at the work site was able to produce a temp stick or other temperature monitoring device. The latest entry on the "report of steel plate heat straightening process checking" attached to HSR1(B)-8858 presented to this QA Inspector by QCA1 was at 0915 hours, 11 hours earlier and the number of applications as not being recorded. This QA Inspector informed ZPMC QA Zhang Wei, QC1, QCA1, and ABF Representative Cui Zheng Hua, who were all present, that this QA Inspector would generate an Incident Report, Caltrans TL-0015 SAS, concerning the above noted issues. See photos below.

Heat straightening of PCMK OBG SP3113A, side plate. QC was identified as QC1. Assisting QC1 at this

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## WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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location and appearing to be monitoring the heat treating and recording data was QCA1, who was not a CWI. Heat treatment observed by this QA Inspector and recorded by QCA1 appeared to comply with HSR1(B)-8861 presented to this QA Inspector by QCA1.

SMAW welding of weld joint SSD1-TL5-1F-F-9 located on PCMK south tower, lift 5, internal connection plates. Alternating welders were identified as 052493, 500363. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

SMAW welding of weld joint SSD1-TL5-1F-F-10 located on PCMK south tower, lift 5, internal connection plates. Alternating welders were identified as 040582, 050289. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

SMAW welding of weld joint SSD1-TL5-1F-F-14 located on PCMK south tower, lift 5, internal connection plates. Welder was identified as 052493. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

SMAW welding of weld joint SSD1-TL5-1F-F-15 located on PCMK south tower, lift 5, internal connection plates. Welder was identified as 052930. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

SMAW welding of weld joint NSD1-TL5-3F-F-9 located on PCMK north tower, lift 5, internal connection plates. Alternating welders were identified as 037998, 037780. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

SMAW welding of weld joint NSD1-TL5-3F-F-10 located on PCMK north tower, lift 5, internal connection plates. Alternating welders were identified as 066763, 066418. QC was identified at QC1. Welding variables recorded by QC1 appeared to comply with WPS-B-T-3313-TC-P5. Also at this location and appearing to be monitoring the welding operation was ABF Representative Chi Zheng Hua.

Bay 11

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

SMAW welding of weld joint ESD1-TL5-2B/F-12A located on PCMK east tower, lift 5, internal connection plates. Welder was identified as 202100. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Liu Dao Feng (QCA2), who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3213-TC-U5b. Also at this location and appearing to be monitoring the welding operation was ABF Representative Cui Zheng Hua.

SMAW welding of weld joint ESD1-TL5-2F/F-29A located on PCMK east tower, lift 5, internal connection plates.

# WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

Alternating welders were identified as 040614, 040669. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA2, who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3213-TC-U5b. Also at this location and appearing to be monitoring the welding operation was ABF Representative Cui Zheng Hua.

SMAW welding of weld joint ESD1-TL5-2E/F-27A located on PCMK east tower, lift 5, internal connection plates.

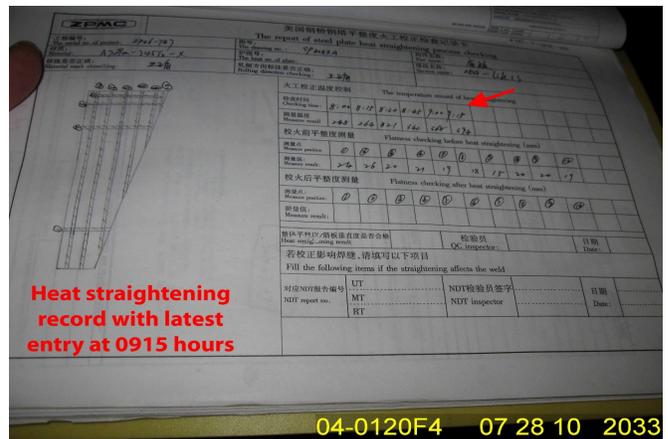
Alternating welders were identified as 040614, 040669. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA2, who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3213-TC-U5b. Also at this location and appearing to be monitoring the welding operation was ABF Representative Cui Zheng Hua.

## Heavy Dock

This QA Inspector randomly observed the following work being performed on the Heavy Dock:

This QA Inspector observed no apparent welding related work was being performed on the Heavy Dock. All 4 tower lifts 2 were erect with all 4 tower lift's 3 attached above, respectively. The lift's 2/3 worker access tower elevator was dark and appeared to be off and unmanned. ABF Representative Kang Li informed this QA Inspector that no work was being performed during this night shift.

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



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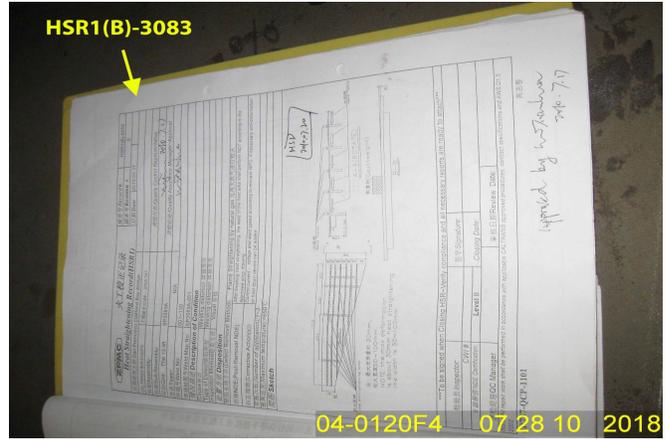
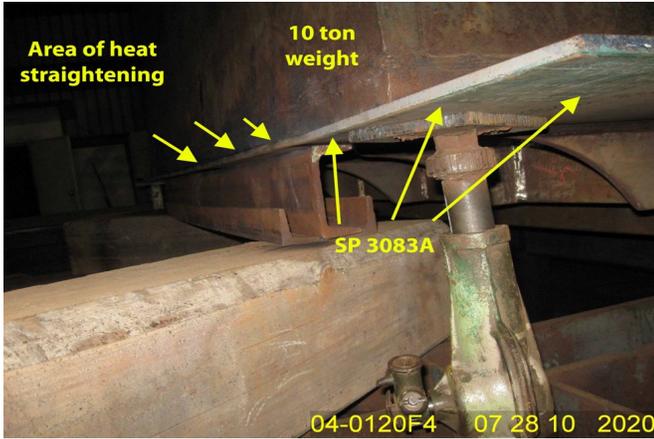
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# WELDING INSPECTION REPORT

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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 Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Goulet, George

Quality Assurance Inspector

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**Reviewed By:** Dawson, Paul

QA Reviewer