

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-011489**Date Inspected:** 19-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 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 joint ED1-A6003-5-18 located on PCMK east tower, strut. Welder was identified as 056364. ZPMC QC was identified as CWI Wang Chuan Qing (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2113. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Kong Xian Hui.

SMAW welding of weld joint ED1-A6003-5-20 located on PCMK east tower, strut. Welder was identified as 050038. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2113. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Kong Xian Hui.

An arc strike with FCAW electrode attached was observed by this QA Inspector at PCMK north tower, lift 4, skin E on the 135M double diaphragm at 135.5M elevation. This QA Inspector marked the location and notified QC1 of the issue. QC1 assured this QA Inspector that the arc strike would be ground and magnetic particle tested. See

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photos below.

SMAW repair welding of weld joint SSSL4-1B/L-4A located outside PCMK south tower, lift 4, skin A/B corner at 127.5M elevation. Welder was identified as 057220. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Wang Hao, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-345-SMAW-4G(4F)-repair listed on the unnumbered ZPMC repair order.

SMAW repair welding of weld joint SSSL4-1B/L-4B located inside PCMK south tower, lift 4, skin A/B corner at 130M to 131M elevation. Welder was identified as 040269. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-345-SMAW-2G(2F)-repair listed on ZPMC repair order T-CWR-508. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SMAW repair welding of weld joint SSSL4-1B/L-4B located inside PCMK south tower, lift 4, skin A/B corner at 123.5M elevation. Welder was identified as 040582. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-345-SMAW-2G(2F)-repair listed on ZPMC repair order T-CWR-508. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

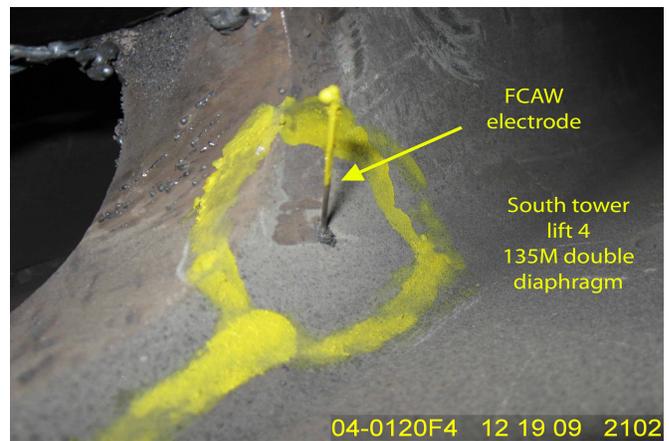
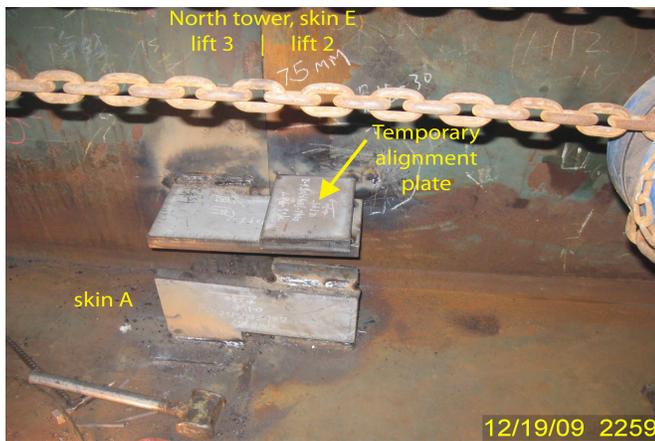
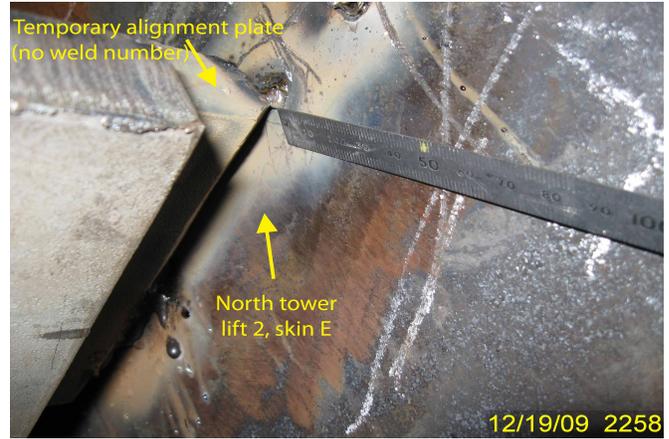
FCAW repair welding of weld joint SSSL4-1B/L-4B located inside PCMK south tower, lift 4, skin A/B corner, at 130M to 131M elevation. Welder was identified as 040269. ZPMC QC was identified as QC1. The welding variables recorded by QC1 appeared to comply with WPS-345-SMAW-2G(2F)-repair listed on ZPMC repair order T-CWR-508. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SMAW welding of partial joint penetration weld attaching a temporary alignment plate to inside north tower, lift 2 at the lift 2/lift 3 joint, skin E (100 mm thickness), approximately 300mm from skin A, without sufficient base material preheat as required by the relevant WPS noted below. This QA Inspector observed multiple 110 degree Celsius Tempilstik temperature indicator marks applied by this QA Inspector to the adjacent base material within approximately 50mm from the point of welding did not melt. This QA Inspector notified QC1 of the issue and generated an incident report (TL-15) concerning this issue. Welder was identified as 053469. ZPMC QC was identified as QC1. The other welding variables recorded by QC1 appeared to comply with WPS-B-P-2112.

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.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Dawson, Paul

QA Reviewer