

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-016324**Date Inspected:** 11-Aug-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 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 11

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

SMAW welding of weld joint WSD1-TL5-4B/F-22A located on PCMK west tower, lift 5, internal connection plates. Alternating welders were identified as 037998, 066326. QC was identified as ZPMC CWI Ye Yong Jun (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Shao Hai Lang (QCA1), who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U5b.

SMAW welding of weld joint WSD1-TL5-4E/F-1A located on PCMK west tower, lift 5, internal connection plates.

Alternating welders were identified as 066398, 066401. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U5b.

SMAW welding of weld joint WSD1-TL5-4E/F-4B located on PCMK west tower, lift 5, internal connection plates.

Alternating welders were identified as 066418, 066763. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U5b.

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SMAW welding of weld joint WSD1-TL5-4F/F-4A located on PCMK west tower, lift 5, internal connection plates. Alternating welders were identified as 037780, 037743. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U5b.

SMAW welding of weld joint ESD1-TL5-2B/F-42 located on PCMK east tower, lift 5, external connection plates. Alternating welders were identified as 040667, 040614. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint ESD1-TL5-2B/F-41 located on PCMK east tower, lift 5, external connection plates. Alternating welders were identified as 202100, 040690. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U4c.

SMAW welding of weld joint ESD1-TL5-2B/F-7A located on PCMK east tower, lift 5, internal connection plates. Welder was identified as 046704. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was QCA1, who was not a CWI. Welding variables recorded by QCA1 appeared to comply with WPS-B-T-3213-TC-U5b.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

SMAW welding of weld joint SSD1-TL5-1B-F-6A located on PCMK south tower, lift 5, internal connection plates. Alternating welders were identified as 059257, 044515. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yu Zhi Li (QCA2), who was not a CWI. Welding variables recorded by QCA2 appeared to comply with WPS-B-T-3313-TC-U5b.

SMAW welding of weld joint SSD1-TL5-1B-F-22 located on PCMK south tower, lift 5, external connection plates. Welder was identified as 053049. 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-U4c.

SMAW welding of weld joint SSD1-TL5-1B-F-23 located on PCMK south tower, lift 5, external connection plates. Welder was identified as 052493. 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-U4c.

SMAW welding of weld joint SSD1-TL5-1B-F-53 located on PCMK south tower, lift 5, external connection plates. Welder was identified as 056200. 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-U4c.

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SMAW welding of weld joint SSD1-TL5-1B-F-54 located on PCMK south tower, lift 5, external connection plates.

Welder was identified as 052930. 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-U4c.

SMAW welding of weld joint NSD1-TL5-3B-F-80 located on PCMK north tower, lift 5, internal connection plates.

Alternating welders were identified as 066413, 067656, 066416. QC was identified at 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. This welding was being performed on the back side of weld NSD1-TL5-3B-F-12. The weld map shows that joint to be a weld detail WT253 which is a CJP with backing bar and uses WPS-B-T-3213-TC-U4c. The QC1 informed this QA Inspector that ZPMC has changed that weld configuration by gouging the back side, which was designed for a backing bar, and now was welding that joint per WPS-B-T-3213-U5b, which gets backgouged and welded on the backside. QC1 also informed this QA Inspector that the weld on the back side of NSD1-TL5-3B-F-12 had been assigned the new weld number NSD1-TL5-3B-F-80. The CWI produced a document which appears to be related only to the NDT of that joint. See photos of that two page document below.

Heavy Dock

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

This QA Inspector observed no apparent work was being performed on the Heavy Dock. All 4 tower lift's 3 were connected and positioned vertically on a base pedestal at end of the heavy dock. East and south tower lift's 2 were positioned horizontally on stanchions with scaffolding erected around them on the deck at the end of the Heavy Dock. The ZPMC 1600 ton floating crane was moored to the end of the Heavy Dock. It appeared that a static load test was being performed on the crane as test weights were hanging from the main hooks. ABF Representative Kang Yi confirmed that no work was being performed on the Heavy Dock.

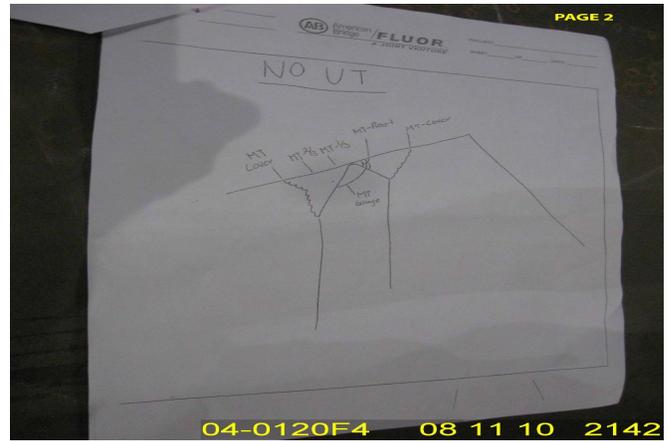
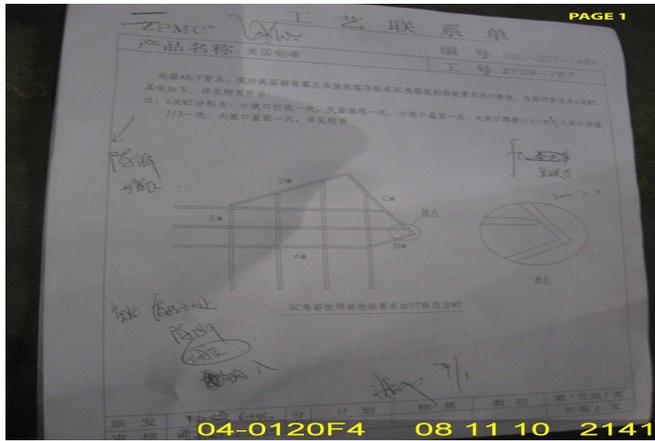
Blast Shop 1

ZPMC requested Caltrans personnel to perform visual inspections of west tower, lift 2 from the upper side of 56M single diaphragm to the top of 77M double diaphragm. At approximately 0130 hours, following the initial blast cleaning of the steel surfaces, Caltrans QA Inspectors Ken Riley, Paul Dawson, and this QA Inspector performed random visual inspections of these areas. ABF and ZPMC Inspectors were present and performing visual inspections of the areas noted above. This QA Inspector visually observed several areas that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, rough edges of unground welds, and sharp edges of ground welds. These areas were clearly marked with chalk as either "grind" or "grind and perform magnetic particle testing (MT)" using the letter G or the letters G+MT.

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 Micheal Ng, 159-2184-5703, who represents the Office of Structural Materials for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Dawson, Paul

QA Reviewer