

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-016322**Date Inspected:** 09-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 066261, 066326. QC was identified as Xu Le Feng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao (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-TL5-2E/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.

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SMAW welding of weld joint ESD1-TL5-2E/F-7B located on PCMK east tower, lift 5, internal connection plates. Alternating welders were identified as 046704, 040656. 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-22 located on PCMK south tower, lift 5, connection plates. Welder was identified as 053049. QC was identified as ZPMC CWI Qiu Wen (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Li Peng Fei (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, connection plates. Welder was identified as 052493. QC was identified as QC2. Assisting QC2 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, connection plates. Welder was identified as 056200. QC was identified as QC2. Assisting QC2 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-54 located on PCMK south tower, lift 5, connection plates. Welder was identified as 052930. QC was identified as QC2. Assisting QC2 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-TL5-3B-F-33 located on PCMK south tower, lift 5, internal connection plates. Alternating welders were identified as 066418, 066763. QC was identified at QC2. Assisting QC2 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-3313-TC-P5.

SMAW welding of weld joint SSD1-TL5-3B-F-27 located on PCMK south tower, lift 5, internal connection plates. Alternating welders were identified as 037998, 066763. QC was identified at QC2. Assisting QC2 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-3313-TC-P5.

SMAW welding of weld joint NSD1-TL5-3B-F-11 located on PCMK north tower, lift 5, internal connection plates. Alternating welders were identified as 066413, 067656, 066416. QC was identified at QC2. Assisting QC2 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-3313-TC-P5.

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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 on a base pedestal at end of the heavy dock. East and south tower lift's 2 were positioned horizontally on stanchions on the deck at the end of the heavy dock. The ZPMC floating crane was moored to the end of the Heavy Dock, but sitting idle. ABF Representative Kang Yo confirmed to this QA Inspector that no work was being performed on the Heavy Dock.

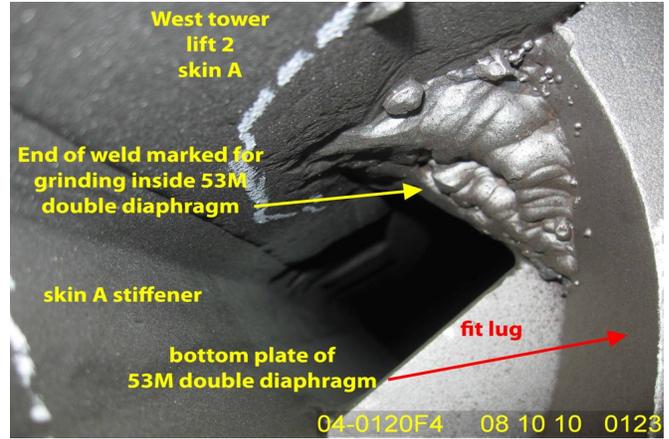
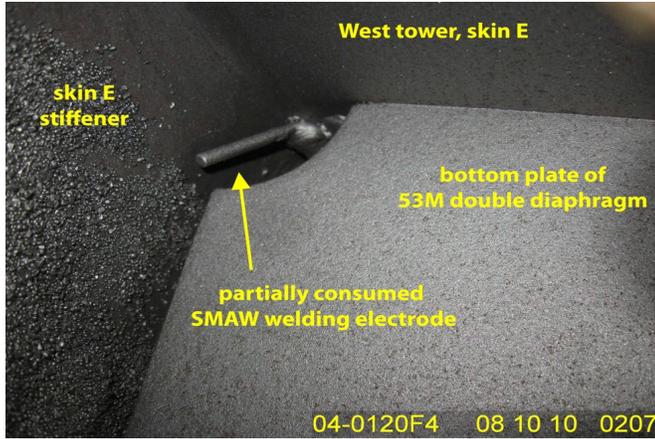
Blast Shop 1

ZPMC requested Caltrans personnel to perform visual inspections of west tower, lift 2 from 50.3M elevation, the bottom of lift 2, to the bottom of 56M single diaphragm and from the top of 77M double diaphragm to 83M elevation, the top of lift 2. At approximately 0030 hours following the initial blast cleaning of the steel surfaces, Caltrans QA Inspectors Ken Riley, Mike Hasler 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 have light areas of rust which indicates the grit blasting was not adequate to prepare the metal surfaces prior to application of paint and approximately 40 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, rough edges of unground welds, and sharp edges of ground welds. Two partially consumed SMAW welding electrodes were also observed extending out from weld joints. See photos below. Approximately 20 locations were marked by ZPMC QC, ABF and/or Caltrans Inspectors, other than this QA Inspector, as needing to be weld repaired. These weld repair areas were clearly marked, photographed and documented. After the inspection was complete, ABF Representative Xiao Jun Peng (ABF1) informed this QA Inspector that the areas requiring grinding and magnetic particle inspection (MT) only were ready for re-inspection. This QA Inspector randomly re-inspected the above noted elevations and observed all areas marked for grinding only appeared to now be in compliance with contract documents. The areas observed that had been marked for grinding and MT had been ground smooth and appeared to have received MT by evidence of the red-dyed iron powder used for the purpose. ABF1 presented this QA Inspector with a copy of the documentation of all areas observed requiring weld repairs.

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