

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-016519**Date Inspected:** 27-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng**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 & OBG Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

TOWER JETTY

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 006494

Magnetic Particle Testing (MT)

This QA inspector performed MT 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 Tower Component. The weld designation/Location reviewed as follows:

REPAIR POINTS AFTER BLASTING (BOTH INTERNAL & EXTERNAL) – WEST TOWER LIFT-2

SKIN 'A' – FAÇADE CONNECTION – 51.9 M ELEVATION

SKIN 'A' – DOUBLER PLATE – 51.7 M ELEVATION

SKIN 'D' – ELEVATOR BRACKET – 81.5 M ELEVATION

SKIN 'B' – 65M ELEVATION

C/D CORNER – DIAGONAL PLATE – 65M ELEVATION

B/C CORNER – DIAGONAL PLATE – 59M ELEVATION

SKIN 'B' – 1ST STIFFENER FROM B/C CORNER

WSD1 – TL7-C/L – 129

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WSD1 – TL7-C/L - 180

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 006501

Visual Inspection Testing (VT)

This QA inspector performed VT of the area previously tested and accepted by ZPMC Quality Control personnel. The member is identified as Tower Component. The identified component designations reviewed are as follows:

LIFT-2 NORTH 53 M OPENING DOOR LOCK DEVICE

P21 – 5 – N

P21 – 6 – N

P21 – 7 – N

Magnetic Particle Testing (MT)

This QA inspector performed MT 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 Tower Component. The weld designation reviewed as follows:

LIFT-2 NORTH 53 M OPENING DOOR LOCK DEVICE

P21 – 5 – N

P21 – 6 – N

P21 – 7 – N

This QA Inspector observed the following work not in compliance:

Description of Incident:

During Magnetic Particle Testing (MT) review of outstanding items on West Tower Lift-2, this Quality Assurance Inspector (QA) discovered the following issue:

- Multiple Linear indications found on base material of Skin 'B' external side.
- Location: West Tower Lift-2 Skin 'B', 4380 mm from top of the tower and 560 mm from Skin B/C corner.
- This member is Non-Seismic Performance Critical Member (non SPCM).
- This member is located at the Heavy Dock area.

The Notice of Witness Inspection Number (NWIT) is 006494. These indications are located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 100% MT inspection of these welds.

Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.

This QA notified ZPMC QC identified as Mr. Sun Zi Wang and ABF inspector identified as Mr. Kim Xiao of the above issue and that an incident report will be generated.

For further information see below pictures:-

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BAY#10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 19 located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 040582. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 24 located on West tower Lift-5 Grillage Assembly WSD1 – TL5 – 4B/F. Welder is identified as 066674. ZPMC Quality Control (QC) Inspector is identified as Mao Bin Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

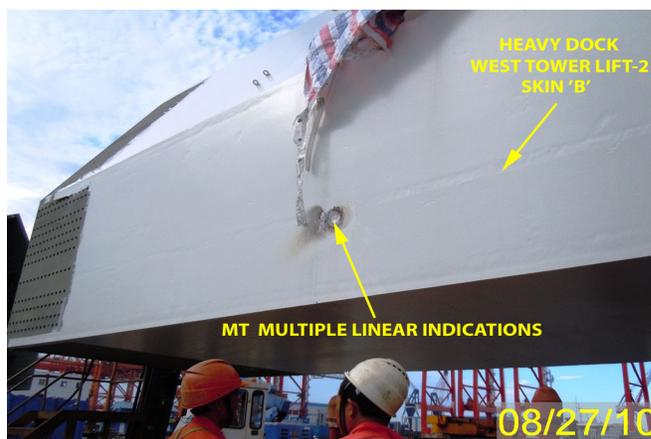
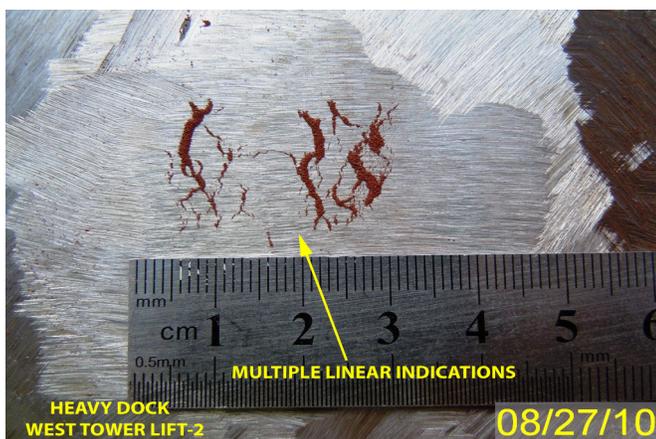
ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

Submerged Arc Welding (SAW):

Weld joint # 37 located on Bottom plate BP3091 – 001. Welder is identified as 044550. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

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



Summary of Conversations:

No Relevant Conversations.

Comments

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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 Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
