

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016515**Date Inspected:** 24-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: Yu Dong Ping
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: 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. 006469

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-3 TOWER CROSS BRACING GUSSET PLATE

WD1 – GUSA3 – 3 – 109M – S – 3A/B; 4A/B

WD1 – GUSA3 – 3 – 109M – N – 3A/B; 4A/B

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-3 TOWER CROSS BRACING GUSSET PLATE

WD1 – GUSA3 – 3 – 109M – S – 4A/B

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WD1 – GUSA3 – 3 – 109M – N – 3A/B; 4A/B

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 4A located on West tower Lift-3 cross bracing gusset plate WD – GUSA3 – 3 – 99M – W. Welder is identified as 040690. ZPMC Quality Control (QC) Inspector is identified Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2212 – Tc – U5 – FCM.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During Magnetic Particle Testing (MT) review of welds on Cross Bracing Gusset Plate, 109 M elevation South Tower Lift-3, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) longitudinal indication measuring approximately 8 mm in length.
- The member is identified as Cross Bracing Gusset Plate.
- The weld is identified as WD1 – GUSA3 – 3 – 109M – S # 3B.
- The weld is a Complete Joint Penetration (CJP) T-joint joining the Cross Bracing Gusset Plate to South Tower Lift-3 at 109 M elevation.
- The member is Seismic Performance critical Member (SPCM).
- The member is located in TOWER JETTY.

The Notice of Witness Inspection Number (NWIT) is 006469. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 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 CWI identified as Mr. Zhao Chen Sun and ABF inspector identified as Mr. Bi Diwei of the above issue and that an incident report will be generated.

For further information see below pictures:-

BAY#10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 15 located on North tower Lift-5 Grillage Assembly NSD1 – TL5 – 3F/F. Welder is identified as 066422. 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 – 3313 – TC – P5.

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Weld joint # 05 located on North tower Lift-5 Grillage Assembly NSD1 – TL5 – 3B/F. Welder is identified as 066179. 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.

Fluxcored Arc Welding (FCAW):

Weld joint # 05 located on Façade Seal Angle ND1 – SFSA4 – 115. Welder is identified as 053116. ZPMC Quality Control (QC) Inspector is identified as Jiang Xiao Bo. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2132.

Weld joint # 11 located on Façade Seal Angle SD1 – SFSA4 – 154. Welder is identified as 053116. ZPMC Quality Control (QC) Inspector is identified as Jiang Xiao Bo. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2132.

BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 6B located on East tower Lift-5 Grillage Assembly ESD1 – TL5 – 2B/F. Welder is identified as 040614. 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 – U5b.

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.

Weld joint # 1B located on Lift-5 Splice Plate Stiffener WSD1 – SPSA5 – 20. Welder is identified as 202100. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 2B located on East tower Lift-5 Grillage Assembly ESD1 – TL5 – 2B/F. Welder is identified as 046769. 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 – U5b.

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

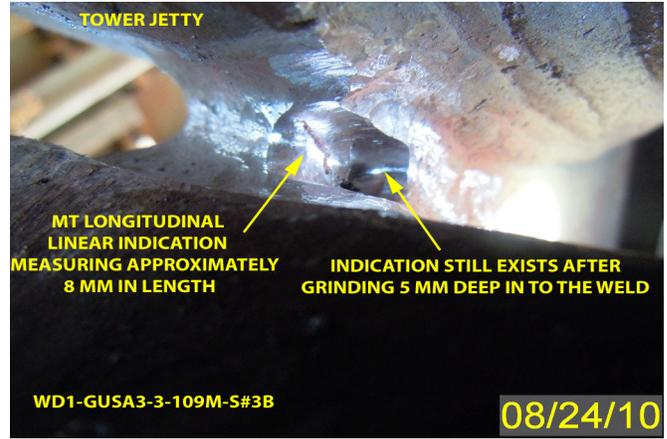
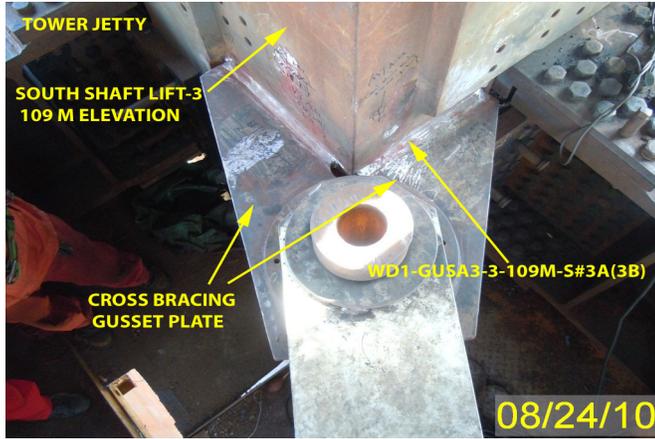
Fluxcored Arc Welding (FCAW):

Weld joint # 28 located on Edge Plate EP3030B – 001. Welder is identified as 040759. 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 – 2132.

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

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Summary of Conversations:

No Relevant Conversations.

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 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