

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-010966**Date Inspected:** 23-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Liu Fawen**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:** Orthotropic Box Girder (OBG) & Tower Com**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.

BAY 2

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW):

Weld joint # 006 located on Longitudinal Diaphragm LD3022 – 001. Welder is identified as 045209. ZPMC Quality Control (QC) Inspector is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

BAY 3

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW):

Weld joint # 038 located on Corner Assembly CA6501. Welder is identified as 044824. ZPMC Quality Control (QC) Inspector is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2233 – Tc – U4b – F.

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Weld joint # 019 located on Cross Beam CB202A – 014. Welder is identified as 204338. ZPMC Quality Control (QC) Inspector is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

Weld joint # 036 located on Corner Assembly CA6501. Welder is identified as 044824. ZPMC Quality Control (QC) Inspector is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

BAY 5

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 004919

Magnetic Particle Testing (MT)

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. 10TR2 – 019 – 001; 002; 005~014
2. 10TR2 – 020 – 001; 002; 005~013

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW):

Weld joint # 003 located on Bike Path BK001 – 044. Welder is identified as 067275. ZPMC Quality Control (QC) Inspector is identified as Wang Liyang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4c – F.

Weld joint # 014 located on Traveler Rail 10TR5 – 001. Welder is identified as 250353. ZPMC Quality Control (QC) Inspector is identified as Shen Jian Guo. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U5 – F.

Weld joint # 003 located on Bike Path BK001 – 046. Welder is identified as 066734. ZPMC Quality Control (QC) Inspector is identified as Wang Liyang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4c – F.

This QA Inspector observed the following work not in compliance:

During Magnetic Particle Testing (MT) review of welds on Traveler Rail 10TR2-020, this Quality Assurance Inspector (QA) discovered the following issues:

- Two (2) transverse linear indications measuring approximately 5mm each in length.
- The member is identified as traveler rail 10TR2-020.
- The weld is identified as 10TR2-020-014.
- The weld is a Complete Joint Penetration (CJP) T-joint joining the web plate (TR10K) to the flange (TR10M).

- The member is located in OBG Bay 5.

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The Notice of Witness Inspection Number (NWIT) is 004919. The indications are located outside 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 Fifty (50%) percent MT inspection of this weld.

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. Zhong Chong Biao and ABF inspector identified as Mr. Wang Wen Bin of the above issue and that an incident report will be generated.

See attached photos:

BAY 6

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 004919

Magnetic Particle Testing (MT)

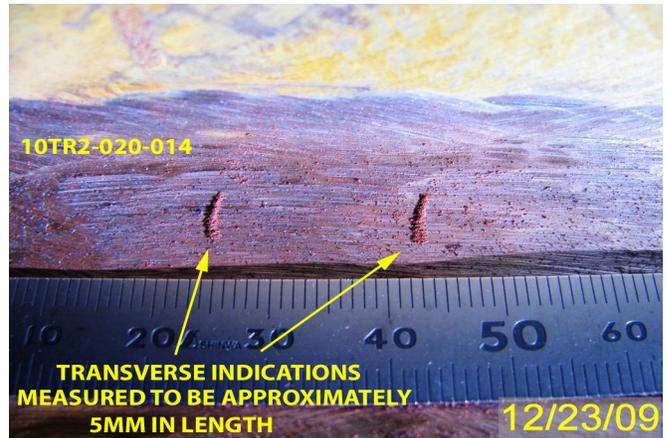
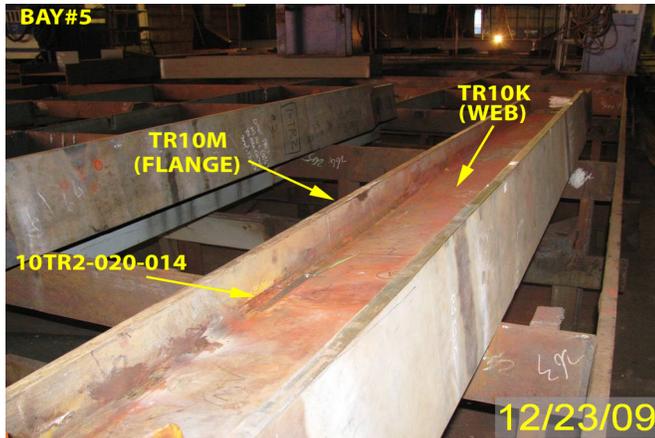
This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as TOWER Components. The weld designations reviewed are as follows:

1. ND1 – SA658 – 65M – 004 – 1A/B
2. ND1 – SA658 – 65M – 007 – 1A/B
3. ND1 – SA658 – 65M – 015 – 1A/B
4. ND1 – SA658 – 53M – 005 – 1A/B
5. ND1 – SA658 – 53M – 010 – 1A/B
6. ND1 – SA658 – 53M – 012 – 1A/B
7. ND1 – SA658 – 53M – 019 – 1A/B

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 Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Kumar,Sandeep

Quality Assurance Inspector

Reviewed By: Hall,Steven

QA Reviewer