

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-018982**Date Inspected:** 26-Dec-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: Mr. Liu Fa Wen
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:** OBG**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Baskar Govindarajan, was present during the times noted above for observations relative to the work being performed.

Bay #8

This QA Inspector observed the following work in progress

Orthotropic Box Girder (OBG)

Flux cored Arc welding (FCAW)

Weld joint # 035 located on Bike path, OBG Component BK 004A6 -059. Welder is identified as 500479. ZPMC Quality Control (QC) Inspector is identified as Liu Fa Wen. The welding variables recorded by QC appeared to comply with the WPS – B –T -2132-Esab.

Weld joint # 123 located on Bike path, OBG Component BK 004A5 -064. Welder is identified as 500405. ZPMC Quality Control (QC) Inspector is identified as Liu Fa Wen. The welding variables recorded by QC appeared to comply with the WPS – B –T -2132-Esab.

Shielded Metal Arc Welding (SMAW)

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Weld joint # 112 located on Bike path, OBG Component BK 004A5 -064. Welder is identified as 069894. ZPMC Quality Control (QC) Inspector is identified as Liu Fa Wen. The welding variables recorded by QC appeared to comply with the WPS – B –P -2213 –B –U2.

Bay #10

Shielded Metal Arc Welding (SMAW)

Weld joint # 014 located on Hole plugging in Bike path BK 004A2 -031, OBG Component. Welder is identified as 052493. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B –P -2112 -Plug.

Flux cored Arc welding (FCAW)

Weld joint # 002 located on Bike path, OBG Component BK 004A2 -031. Welder is identified as 040533. 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 -2132-Esab.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Quality Assurance Inspection of Bike path at Bay no. 10, this Quality Assurance Inspector (QA) discovered the following issue:

- Approx. 3 to 5 mm Gap found between Bottom cover plate and Side plate, of Bike path BK 004A2-031, before welding
- The Weld joint no. identified as BK004A2 -031 -13 and BK 004A2 -031 -21
- The area of Bike path is Bay no. 10
- 7 mm Gap observed, approx. 2000 mm from Y axis end.
- The WPS for the weld identified as WPS –B –T -2132-ESAB.

Applicable reference:

AWS D1.5 Section - 3.3.1 –“The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance.”

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This QA notified ZPMC QC identified as Mr. Yu Zhi Lai and ABF inspector identified as Mr. Zhao Xian Wei of the above issue and that an incident report will be generated.

Ultrasonic Testing (UT)

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 07930.

This QA inspector performed UT of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report (TL 6027) for this date. The member is identified as OBG Bike path Components at Bay #10. The weld designation reviewed as follows:

BK007A5-001-008, 002
BK 007A3-001-010,002
BK004A5-033-008, 002
BK004A3-033-010, 002

Magnetic Particle Testing (MT)

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 07935

This QA inspector performed (MT) of approximately 15% of an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA Inspector generated an TL 6028 MT report for this date. The member is identified as OBG Bike path components. The weld designations reviewed are as follows:

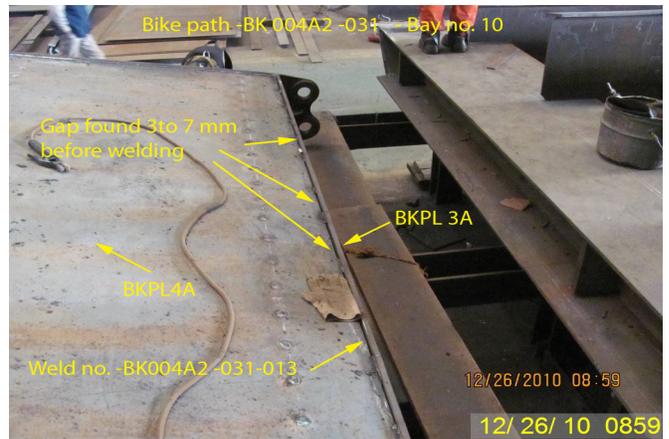
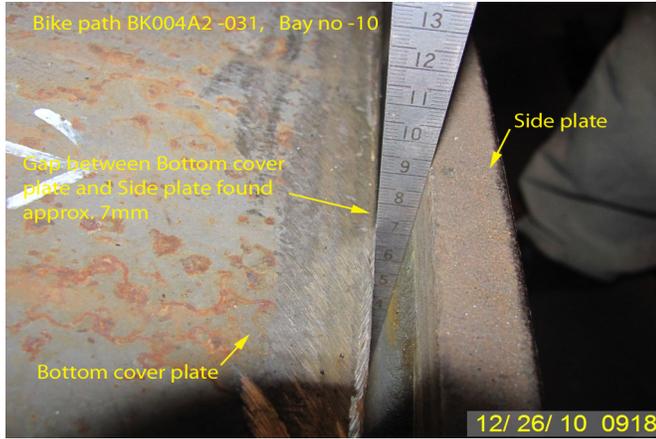
BK004A2-057 – Jt. nos. – 016, 018

For further information see below pictures:-

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the 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 Thomas Hu (15002048250), who represents the Office of Structural Materials for your project.

Inspected By: Baskar, Govindarajan

Quality Assurance Inspector

Reviewed By: Clifford, William

QA Reviewer