

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-010542**Date Inspected:** 04-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) 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.

BAY 2

This QA Inspector observed the following work in progress:

Submerged Arc Welding (SAW):

Weld joint # 010 located on Longitudinal Diaphragm LD3023 – 001. Welder is identified as 045270. 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 – 2221 – B – L2c – S – 2.

Weld joint # 019 located on Longitudinal Diaphragm LD3020 – 019. Welder is identified as 250050. 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 – 2221 – B – L2c – S – 2.

Weld joint # 003 located on Longitudinal Diaphragm LD3024 – 001. Welder is identified as 045270. 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 – 2221 – B – L2c – S – 2.

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This QA Inspector observed the following work not in compliance:

During random in process visual inspection at Bay # 2, this Quality Assurance Inspector (QA) observed an OBG FL3 lift 12 floor beam web plate-X3003C had been arc gouged approximately 15 mm deep in to the base material during the excavation of Complete Joint Penetration (CJP) web to flange T-weld joint after Ultrasonic Testing (UT) reject by ZPMC UT technicians.

The affected floor beam and weld joint details are as follows:

FB3006-001-148 (Web to flange)

Complete Joint Penetration (CJP) T- joint

Web plate – X3003C, SPCM

Flange – X3014B

Applicable reference: AWS D1.5 2002, Section 3

3.7.1 “The removal of the weld metal or portions of the base metal may be done by machining, carbon arc cutting and gouging, thermal cutting, chipping, or grinding. It shall be done in such a manner that the remaining weld metal or base metal is not nicked or undercut.”

“Unacceptable portions of the weld shall be removed without substantial removal of the base metal.”

This QA notified ZPMC QC identified as Mr. Yang Qing Feng and ABF inspector identified as Mr. Luo Gui Lin of the above issue and that an incident report will be generated.

See attached photos:

BAY 5

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 004788

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 member is identified as OBG Component. The weld designations reviewed are as follows:

1. 10TR1 – 005 – 002
2. 10TR4 – 005 – 001
3. 10TR4 – 005 – 001
4. 10TR4 – 005 – 002
5. 10TR4 – 005 – 002
6. 10TR5 – 005 – 001
7. 10TR5 – 005 – 001
8. 10TR4 – 005 – 002
9. 11TR5 – 005 – 002
10. 11TR5 – 005 – 002
11. 11TR5 – 005 – 002
12. 11TR5 – 005 – 002

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13. 11TR5 – 005 – 002
14. 11TR5 – 005 – 002
15. 11TR5 – 005 – 002
16. 11TR5 – 005 – 001
17. 11TR7 – 001 – 001
18. 11TR10 – 001 – 002
19. 11TR10 – 002 – 001
20. 10TR3 – 019 – 001

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 004788

Ultrasonic Testing (UT)

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

1. 10TR1 – 005 – 001
2. 10TR4 – 005 – 002
3. 10TR4 – 005 – 002
4. 10TR4 – 005 – 001
5. 10TR4 – 005 – 001
6. 10TR5 – 005 – 002
7. 10TR5 – 005 – 002
8. 10TR4 – 005 – 001
9. 11TR5 – 005 – 001
10. 11TR5 – 005 – 001
11. 11TR5 – 005 – 001
12. 11TR5 – 005 – 001
13. 11TR5 – 005 – 001
14. 11TR5 – 005 – 001
15. 11TR5 – 005 – 001
16. 11TR5 – 005 – 002
17. 11TR7 – 001 – 002
18. 11TR10 – 001 – 001
19. 11TR10 – 002 – 002
20. 10TR3 – 019 – 002

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW):

Weld joint # 011 located on Traveler Rail 11TR3 – 006. Welder is identified as 205390. ZPMC Quality Control (QC) Inspector is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 014 located on Traveler Rail 11TR3 – 016. Welder is identified as 215076. ZPMC Quality Control

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(QC) Inspector is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U5 – F.

Weld joint # 011 located on Traveler Rail 11TR3 – 017. Welder is identified as 066239. ZPMC Quality Control (QC) Inspector is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 003 located on Traveler Rail 10TR6 – 002. Welder is identified as 069895. ZPMC Quality Control (QC) Inspector is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – B – U2 – F.

Weld joint # 008 located on Traveler Rail 11TR3 – 017. Welder is identified as 205390. ZPMC Quality Control (QC) Inspector is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

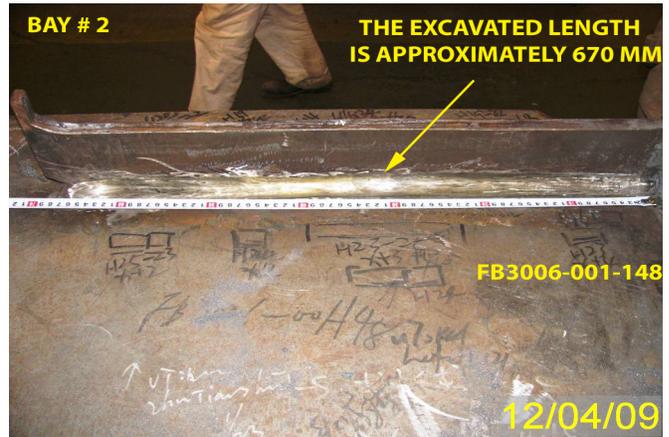
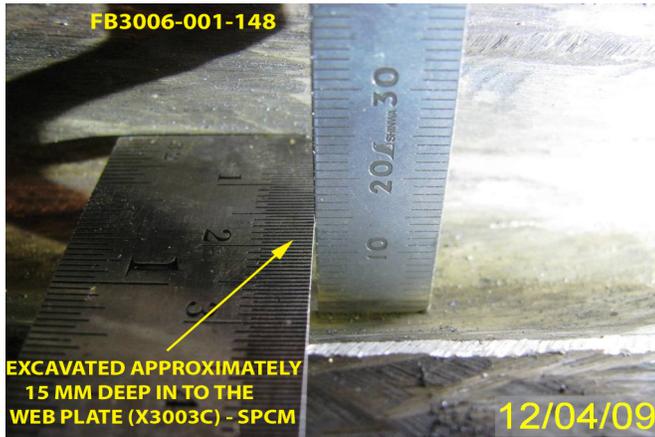
BAY 6

Green Tag

Issued a green tag after the completion of NDT requirements for the following OBG component:

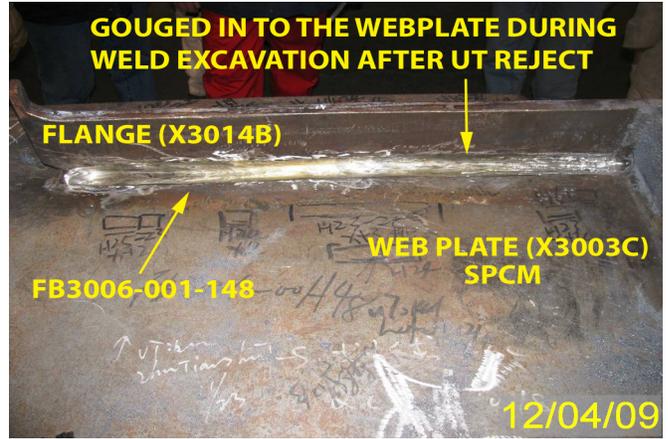
1. Edge Plate – EP3012 – 001 – Green Tag # 10619

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