

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000804**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0766**Type of problem:**

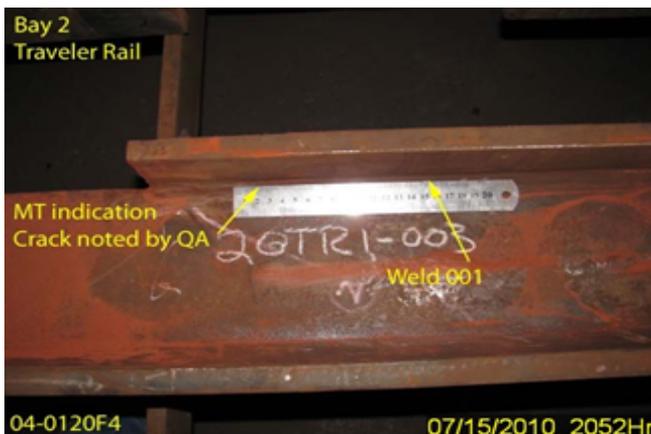
Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Traveler Rail
Procedural	Procedural	Description: Missed MT crack by QC	

Reference Description: QA found a 60mm long MT crack after the contractor's had tested and accepted a weld on a Traveler Rail

Description of Non-Conformance:

During Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Bottom Plate, this QA Inspector discovered the following issue:

- Weld identified as: 20TR1-003-001.
- One (1) longitudinal linear crack at the toe of the weld was found by QA.
- The "Y" location is approximately 60mm from the end of the stiffener.
- Length of Crack is 70mm.
- The weld is a CJP.
- This Traveler Rail is located in the OBG Sub assembly Bay #2.
- ZPMC QC agreed that this is a MT crack and will require a Critical Weld Repair (CWR)
- The Notice of Witness Inspection Number (NWIT) is 06206 item #4. The crack is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5 2002 Section 6 par.6.26.2 – Welds that are subject to RT or MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any of the types of discontinuities described in 6.26.2.1, 6.26.2.2, 6.26.2.3 or 6.26.2.4.

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.”

Who discovered the problem: Ken Riley

Name of individual from Contractor notified: Kelvin Cheung

Time and method of notification: 2120 hours, 07/15/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 1200 hours, 07/16/10, Verbal

QC Inspector's Name: Zhu Lin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
 333 Burma Road
 Oakland CA 94607
 Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV **Date:** 19-Jul-2010
 375 BURMA ROAD
 OAKLAND CA 95607 **Contract No:** 04-0120F4
 04-SF-80-13.2 / 13.9
Dear: Mr. Charles Kanapicki **Job Name:** SAS Superstructure
Attention: Mr. Thomas Nilsson Project/Fabrication Manager **Document No:** 05.03.06-000761
Subject: NCR No. ZPMC-0766

Reference Description: QA found a 60mm long MT crack after the contractor's had tested and accepted a weld on a Traveler Rail

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG **Lift:**

Remarks:

During Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Bottom Plate, this QA Inspector discovered the following issue:

- Weld identified as: 20TR1-003-001.
- One (1) longitudinal linear crack at the toe of the weld was found by QA.
- The "Y" location is approximately 60mm from the end of the stiffener.
- Length of Crack is 70mm.
- The weld is a CJP.
- This Traveler Rail is located in the OBG Sub assembly Bay #2.
- ZPMC QC agreed that this is a MT crack and will require a Critical Weld Repair (CWR)
- The Notice of Witness Inspection Number (NWIT) is 06206 item #4. The crack is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Laraine Woo Transportation Engineer

Attachments: ZPMC-0766

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000761

Subject: NCR No. ZPMC-0766

Dated: 12-Aug-2010

Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9

Job Name: SAS Superstructure

Document No.: ABF-NPR-000735 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has performed the repair of this indication and attached the subsequent MT report denoting acceptance of this weld.

ZPMC has performed the repair of this indication and attached the subsequent MT report denoting acceptance of this weld. ZPMC and ABFJV have held several meetings with the NDT department regarding missed indications. A disciplinary action procedure has been developed as well as an incentive procedure regarding this issue. We have stressed the point of being more thorough with inspections and to provide a cross checking for designated welds and or if questions arise regarding indications. ZPMC has also performed an internal training with the MT operators. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000735R00

Caltrans' comments:

Status: AAP

Date: 17-Aug-2010

The proposed resolution is acceptable. However, the NDT data was not attached. Please submit the missing data.

Submitted by: Woo, Laraine

Date: 17-Aug-2010

Attachment(s):

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000761

Subject: NCR No. ZPMC-0766

Dated: 25-Aug-2010

Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9

Job Name: SAS Superstructure

Document No.: ABF-NPR-000735 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: Attached is the NDT documentation requested which shows that the repair was successful and the weld is acceptable.

Attached is the NDT documentation requested which shows that the repair was successful and the weld is acceptable. Based on these results and previously submitted responses, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000735R01;

Caltrans' comments:

Status: CLO

Date: 31-Aug-2010

The submitted documentation is sufficient to close this NCR.

Submitted by: Woo, Laraine

Date: 31-Aug-2010

Attachment(s):



No. B-836

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-08-11

REGARDING: NCR-000804(ZPMC-0766)

ZPMC is providing the NDT record show the missed indication has been repaired and was tested to be acceptable. To reduce the same case from occurring ZPMC has performed an internal MT refresh training to all the MT operators on July 31, 2010. Based on this ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000804(ZPMC-0766)

B787-MT-24930 R1

MT REFRESH TRAINING RECORD

A handwritten signature in black ink, appearing to be "J. W.", is written over the typed name of the sender.

8/11/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
 333 Burma Road
 Oakland CA 94607
 Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
 375 BURMA ROAD
 OAKLAND CA 95607

Date: 19-Jul-2010

Contract No: 04-0120F4
 04-SF-80-13.2 / 13.9

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager
 Subject: NCR No. ZPMC-0766

Job Name: SAS Superstructure
 Document No: 05.03.06-000761

Reference Description: QA found a 60mm long MT crack after the contractor's had tested and accepted a weld on a Traveler Rail

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- Quality Control (QC) not performed in conformance with contract documents.
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Lift:

Remarks:

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Attachments: ZPMC-0766

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, Bill Casey
 File: 05.03.06

02.02.15.04
 N2 05.03.06-000761.NCT

Received
 NCT-000761 19 Jul 10 Page 1 of 1

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Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000804

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 15-Jul-2010

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0766

Type of problem:

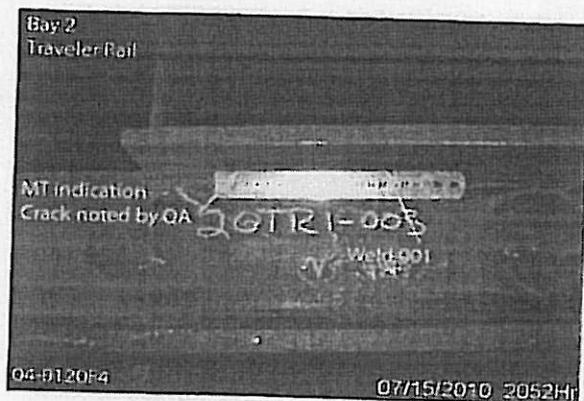
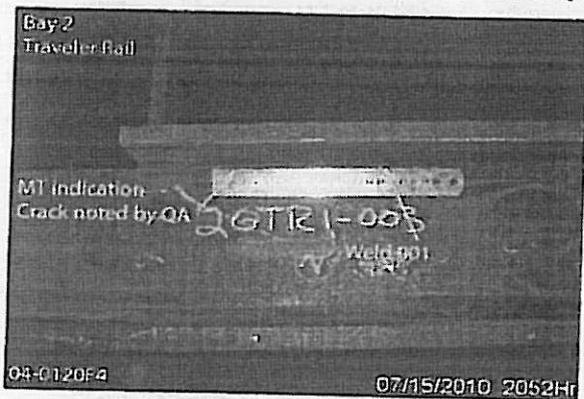
Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: OBG Traveler Rail
 Procedural Procedural Description: Missed MT crack by QC

Reference Description: QA found a 60mm long MT crack after the contractor's had tested and accepted a weld on a Traveler Rail

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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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.”

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Name of individual from Contractor notified: Kelvin Cheung

Time and method of notification: 2120 hours, 07/15/10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 1200 hours, 07/16/10, Verbal

QC Inspector's Name: Zhu Lin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

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Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR

探伤室人员培训记录表

培训主题		培训对象
美国细粉MT技术		ORG所有MT人员
主讲人		教材
李黎明		
考核方式		时间
		2020.07.31
姓名	岗位	培训内容: 现场检测及操作规范: 1. 检测间距为50~150, 磁极与材料有最大接触面。 2. 光斑连续法, 磁粉应均匀覆盖检测表面, 吹去磁粉时必须小心。 3. 检测剂必须清除检测表面任何会影响检测结果和判断的外来物。必须在VT合格后再检测。 4. 缺陷修补后和施工队VT修补后必须按要求MT检测。焊缝重新进行检测复探。 检测人员要求: 1. 检测人员在操作时必须要认真, 进行全方位多角度检测, 尤其是过焊子位置。 2. 必须要求要达到检测和判断所需的光照。 3. 对于完工和报检时间间隔较长的工件应当对其进行抽查或100%复探, 以免产生的延迟裂纹对报检结果不利。 4. 有眼疲劳现象时应停止检测, 以免漏检, 由其他员代替检测。
丁所成		
曹国杰		
傅若强		
薛博尔		
丁磊		
李永		
魏志		
金厚臣		
沈伟		
古国明		
曹文耀		
沈佳		
黄程		
谭超伟		
王清		
孙磊		
陈春光		
陈浩		
李敏		
李立		

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000742**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 01-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0766**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 15-Jul-2010**Description of Non-Conformance:**

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Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor supplied post repair NDT documentation verifying weld is in conformance with Contract weld quality requirements. Contractor has also taken action directly with NDT Technicians to avoid similar issues in the future.

Did corrective action require Engineer's approval? Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?** Yes No**Comments:**

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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer
