

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



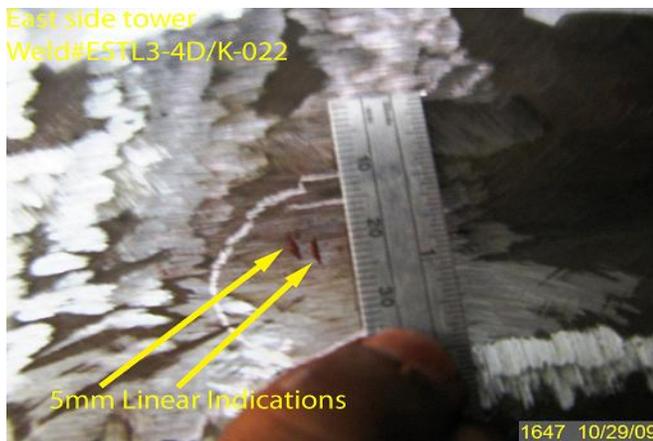
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000464**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 29-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0437**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: East Tower
Procedural	Procedural	Description: East Tower, Lift 3	

Reference Description: Missed MT indications on East Tower, Lift 3 Fit Lug weld**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) of East Tower, Lift 3, 89m diaphragm fit lug weld ESTL3-4D/K-022, QA discovered two transverse linear indications of approximately 5mm in length. This weld has been previously tested and accepted by ZPMC NDT personnel.

**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 D1.5-2002, Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Hiranch Patel**Name of individual from Contractor notified:** Xing Xiao Guang

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 10/29/2009, 17:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 11/2/2009, 8:00; Verbal

QC Inspector's Name: Zhao Mao Mao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
 333 Burma Road
 Oakland CA 94607
 Tel: 510-808-4618 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 03-Nov-2009

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-0437

Job Name: SAS Superstructure
Document No: 05.03.06-000423

Reference Description: Missed indications (MT)/ East Tower, Lift 3/ Fit Lug weld/ Transverse indication

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: Tower **Lift:** 03

Remarks:

During Magnetic Particle Testing (MT) of East Tower, Lift 3, 89m diaphragm fit lug weld ESTL3-4D/K-022, QA discovered two transverse linear indications of approximately 5mm in length. This weld has been previously tested and accepted by ZPMC NDT personnel.

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 D1.5-2002, Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance that addresses the failure of Quality Control to identify the linear indications during magnetic particle testing of the weld. Provide documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences. It is understood that MT training was provided by the Quality Control Manager on October 21, 2009. However, the repeated incidences appear to indicate that the training was not effective. Please propose further actions by ABFJV to prevent future occurrences.

In addition to the Quality Control non-conformance, address the material/workmanship for the identified non-conformance including documentation that the deficiency has been brought into compliance with the contract requirements. Additionally address the probable causes for the indication and the actions that will be taken to limit future occurrences.

Recent failures by Quality Control to identify linear indications (MT) have resulted in the issuance of NCR ZPMC-0358, ZPMC-0359, ZPMC-0371, ZPMC-0372, ZPMC-0373, ZPMC-0375, ZPMC-0376, ZPMC-0377, ZPMC-383, ZPMC-0384, ZPMC 0386, ZPMC-0387, ZPMC-0388, ZPMC-0389, ZPMC-0390, ZPMC-0401, ZPMC-0408, ZPMC-0413, ZPMC-419 and ZPMC-422 related to Tower

NCT

(Continued Page 2 of 2)

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0437

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe, Scott Kennedy

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000423

Subject: NCR No. ZPMC-0437

Dated: 25-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000430 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: Attached is documentation of the repair of the missed indications and subsequent NDT. ZPMC requests closure of this NCR.

Attached is documentation of the repair of the missed indications and subsequent NDT. The NDT documentation shows that the weld is acceptable. ABFJV's QCM has conducted training with ZPMC's MT inspectors and has previously submitted the training agenda and sign in sheet to the Department for verification to show the steps ABFJV is taking to address the missed indications. In addition, ABFJV has implemented NDT verification of welds to ensure that welds are acceptable prior to being inspected by the Engineer. On September 24, 2009 an exploration by ABFJV, ZPMC and the Department found that these indications were slag or porosities which were the result of insufficient interpass cleaning. ABFJV has reminded ZPMC of the importance of interpass cleaning of the welds and ZPMC acknowledges that interpass cleaning must be a focus. Based on these actions and the attached documentation, ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000430R00;

Caltrans' comments:

Status: CLO

Date: 11-Dec-2009

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0437 is closed.

Submitted by: Lee, Ken

Date: 11-Dec-2009

Attachment(s):



No. T-083

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-11-24

REGARDING: NCR-000464 (ZPMC-0437)

We ZPMC acknowledge this problem ,About this situation our people at the first time removed the linear indication which is on the surface ,we used the method just by grinding not welding repair. Then did the MT work to make sure no problem on this weld which confirmed by the CT inspector Hiranch Patel, and the CT people accepted this weld and did the green tag on the weld.

As far as I am concerned ,CT should close this NCR.

ATTACHMENT:

NCR-000464 (ZPMC-0437)

REPORT OF MAGNETIC PARTICLE: T787-MT-7041

Li Xingyong

09.11.24



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: 510-808-4618 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 03-Nov-2009

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

Dear: Mr. Charles Kanapicki

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0437

Document No: 05.03.06-000423

Reference Description: Missed indications (MT)/ East Tower, Lift 3/ Fit Lug weld/ Transverse indication

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: Tower

Lift: 03

Remarks:

During Magnetic Particle Testing (MT) of East Tower, Lift 3, 89m diaphragm fit lug weld ESTL3-4D/K-022, QA discovered two transverse linear indications of approximately 5mm in length. This weld has been previously tested and accepted by ZPMC NDT personnel.

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 D1.5-2002, Section 6.26.2 - "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance that addresses the failure of Quality Control to identify the linear indications during magnetic particle testing of the weld. Provide documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences. It is understood that MT training was provided by the Quality Control Manager on October 21, 2009. However, the repeated incidences appear to indicate that the training was not effective. Please propose further actions by ABFJV to prevent future occurrences.

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NCT

(Continued Page 2 of 2)

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0437

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe, Scott Kennedy

File: 05.03.06

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
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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, PRC

Report No: NCR-000464

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 29-Oct-2009

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

NCR #: ZPMC-0437

Type of problem:

Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** East Tower
 Procedural Procedural **Description:** East Tower, Lift 3

Reference Description: Missed MT indications on East Tower, Lift 3 Fit Lug weld

Description of Non-Conformance:

During Magnetic Particle Testing (MT) of East Tower, Lift 3, 89m diaphragm fit lug weld ESTL3-4D/K-022, QA discovered two transverse linear indications of approximately 5mm in length. This weld has been previously tested and accepted by ZPMC NDT personnel.



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 D1.5-2002, Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Hiranch Patel

Name of individual from Contractor notified: Xing Xiao Guang

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 10/29/2009, 17:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 11/2/2009, 8:00; Verbal

QC Inspector's Name: Zhao Mao Mao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod,Serge

ASMR

Reviewed By: Wahbeh,Mazen

SMR

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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, PRC**Report No:** NCS-000338**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0437**Type of problem:**

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

Date the Non-Conformance Report was written: 29-Oct-2009**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) of East Tower, Lift 3, 89m diaphragm fit lug weld ESTL3-4D/K-022, QA discovered two transverse linear indications of approximately 5mm in length. This weld has been previously tested and accepted by ZPMC NDT personnel.

Contractor's proposal to correct the problem:

Repair affected welds.

Corrective action taken:

Affected weld has been repaired, verified by QA, and green tagged. To resolve the recurring failure for QC to detect MT indications, ABFJV QCM has implemented training with ZPMC to improve quality of inspectors. Topics include: inspection of equipment prior to use, proper conditions for inspection, proper technique for MT & UT.

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:**

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod, Serge

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer