

**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 #: xx.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, China**Report No:** NCR-000970**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Jan-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0929**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Lift 13AW, Weld # SEG3013AU-060
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Missed Longitudinal Toe Crack (MT) Discovered by QA Lift 13AW RS Stiffener to Bottom Plate

**Description of Non-Conformance:**

During Quality Assurance Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Lift 13AW, this Quality Assurance Inspector (QA) discovered the following issue:

- One Longitudinal Linear toe crack measuring approximately 40 mm in length.
- The weld is identified as: SEG3013AU-060.
- The weld is designated as Fracture Critical Weld (FCW).
- This weld is a Partial Joint Penetration (PJP) with reinforcement weld joining bottom plate (SA3168A) to Stiffener plate (RS3479A).
- The "Y" location is approximately 410mm East side of the weld termination.
- The "Y" location measured from Panel Point no.119.65 Floor beam identified as FB3194A (as shown on picture below).
- The bottom plate and stiffener plate thickness is 100 mm and 45 mm respectively.
- 13AW is currently located in the OBG assembly Bay # 14.

The Notice of Witness Inspection Number (NWIT) is 08164. The indication is located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, The contractors personnel are required to perform 100% MT inspection of this weld.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )



## Applicable reference:

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks”.

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:** Surendra Prabhu

**Name of individual from Contractor notified:** Peter Shaw

**Time and method of notification:** 1530 hours, 1-14-11 Verbal

**Name of Caltrans Engineer notified:** Sean Eagen

**Time and method of notification:** 1100 hours, 1-15-11 Email

**QC Inspector's Name:** Wang Lu

**Was QC Inspector aware of the problem:** Yes No

**Contractor's proposal to correct the problem:**

NA

## 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

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Devey,Jim	SMR
<b>Reviewed By:</b>	Wahbeh,Mazen	SMR

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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

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

**Date:** 17-Jan-2011

**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:** 05.03.06-000927

**Subject:** NCR No. ZPMC-0929

**Reference Description:** Missed Longitudinal Toe Crack (MT) Discovered by QA Lift 13AW RS Stiffener to Bottom Plate

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:** 13

### Remarks:

During Quality Assurance Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Lift 13AW, this Quality Assurance Inspector (QA) discovered the following issue:

- One Longitudinal Linear toe crack measuring approximately 40 mm in length.
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- The bottom plate and stiffener plate thickness is 100 mm and 45 mm respectively.
- 13AW is currently located in the OBG assembly Bay # 14.

The Notice of Witness Inspection Number (NWIT) is 08164. The indication is located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, The contractors personnel are required to perform 100% MT inspection of this weld.

### Action Required and/or Action Taken:

Propose a resolution for this non-conformance and provide documentation that the deficiency has been brought into compliance with the contract requirements. Propose a resolution that addresses the apparent failure of Quality Control to identify the indication. Additionally, provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

The response for the resolution of this issue is requested within 7 days.

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# NCT

( Continued Page 2 of 2 )

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**Transmitted by:** Sean Eagen      Transportation Engineer

**Attachments:**    ZPMC-0929

**cc:**    Rick Morrow, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000927

**Subject:** NCR No. ZPMC-0929

**Dated:** 23-Feb-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000921 **Rev:** 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC has repaired the indication noted in the NCR and is providing NDT documentation after the repair to show the indication has been removed.

ZPMC has repaired the indication noted in the NCR and is providing NDT documentation after the repair to show the indication has been removed. ABFJV has noted which inspector was responsible for this missed indication and is monitoring his performance as well as all inspector performance, if he continues to miss indications disciplinary action will be undertaken. Based on these actions, ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000921R00;

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**Caltrans' comments:**

**Status:** CLO

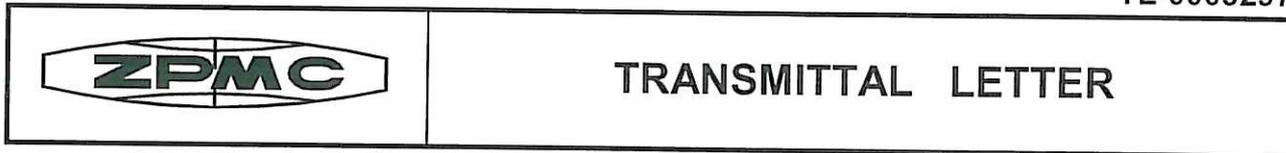
**Date:** 23-Feb-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0929 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 23-Feb-2011



PROJECT: S.F.O.B.B.

DATE:2011-02-22

TO: ROSEMARY/ABF JV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: OBG NCR

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

(01) LR: No. B-973

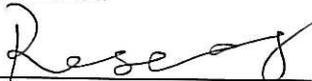
(02) NCR-000970(ZPMC-0929)

B787-MT-35592 R1

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:


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COMPANY:



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PLAN NUMBER:N/A  
#R787-QCP-102

DATE: 8:43  
 RECEIVED 22 FEB 2011  


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PHONE NO.

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No. B-973

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2011-2-21**

**REGARDING: NCR-000970(ZPMC-0929)**

ZPMC acknowledged this problem and has issued an internal NCR. This indication has been removed, repaired and re-tested to be acceptable. ZPMC is providing the NDT record and is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000970(ZPMC-0929)

B787-MT-35592 R1

*Zhang Wei*  
*2/21/11*



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge  
 666 Feng Bin Road Room 708, Changxing Island  
 Shanghai 201913 PR China  
 Tel: 021-56856666 ext 207061 Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

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

Date: 17-Jan-2011  
 Contract No: 04-0120F4  
 04-SF-80-13.2 / 13.9  
 Job Name: SAS Superstructure  
 Document No: 05.03.06-000927

Dear: Mr. Charles Kanapicki  
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
 Subject: NCR No. ZPMC-0929

Reference Description: Missed Longitudinal Toe Crack (MT) Discovered by QA Lift 13AW RS Stiffener to Bottom Plate

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

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- 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: 13

**Remarks:**

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**Action Required and/or Action Taken:**

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The response for the resolution of this issue is requested within 7 days.

15.04  
 05.03.06-000927.NCT

Received  
 NCT-000927 17 Jan 11 Page 1 of 2

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NCT

( Continued Page 2 of 2 )

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Transmitted by: Sean Eagen      Transportation Engineer

Attachments:    ZPMC-0929

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

File:  05.03.06

DEPARTMENT OF TRANSPORTATION  
 DIVISION OF ENGINEERING SERVICES  
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 690 Walnut Ave. St. 150  
 Vallejo, CA 94592-1133  
 (707) 649-5453  
 (707) 649-5493

Contract #: 04-0120F4  
 Cty: SE/ALA Rte: 80 PM: 13.2/13.9  
 File #: xx.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, China

Report No: NCR-000970

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Jan-2011

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

NCR #: ZPMC-0929

### Type of problem:

Welding  Concrete  Other

Welding  Curing  Procedural

Joint fit-up  Coating  Other

Procedural  Procedural  Description:

Bridge No: 34-0006

Component: Lift 13AW, Weld # SEG3013AU-060

Reference Description: Missed Longitudinal Toe Crack (MT) Discovered by QA Lift 13AW RS Stiffener to Bottom Plate

### Description of Non-Conformance:

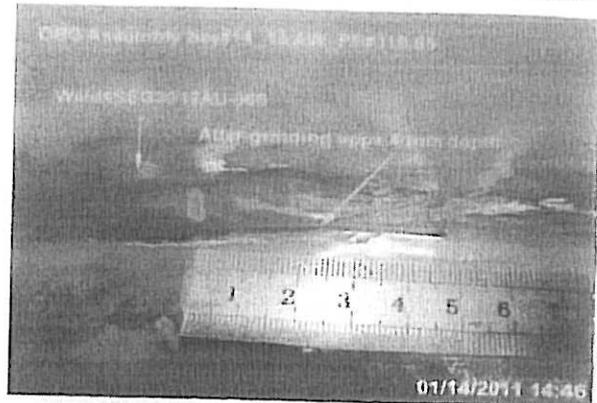
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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



## Applicable reference:

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks”.

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: Surendra Prabhu

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1530 hours, 1-14-11 Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1100 hours, 1-15-11 Email

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

NA

## 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

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 3 of 3 )

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concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Devey,Jim

SMR

**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, China**Report No:** NCS-000913**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Feb-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0929**Type of problem:**

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

**Date the Non-Conformance Report was written:** 14-Jan-2011**Description of Non-Conformance:**

During Quality Assurance Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Lift 13AW, this Quality Assurance Inspector (QA) discovered the following issue:

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**Contractor's proposal to correct the problem:**

Contractor will remove and repair the indication and will do NDT submit NDT report to prove the repaired area is acceptable. ZPMC will issue an internal NCR to the QC personnel and monitor his performance. Disciplinary action will be taken if the inspector continues missing indications.

**Corrective action taken:**

Contractor removed and the indication and repaired the weld. The NDT report confirms the repaired area is acceptable. ZPMC issued an internal NCR to the QC personnel. The inspector's performance is being monitored.

