

**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, China**Report No:** NCR-000997**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Apr-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0955**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> Longitudinal Diaphragm to "I" Stiffener
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Longitudinal Toe Crack Discovered by QA on Segment 13CE Longitudinal Diaphragm to Stiffener Fillet Weld

**Description of Non-Conformance:**

During Quality Assurance Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Longitudinal diaphragm (LD) LD3030A, this Quality Assurance Inspector (QA) discovered the following issue:

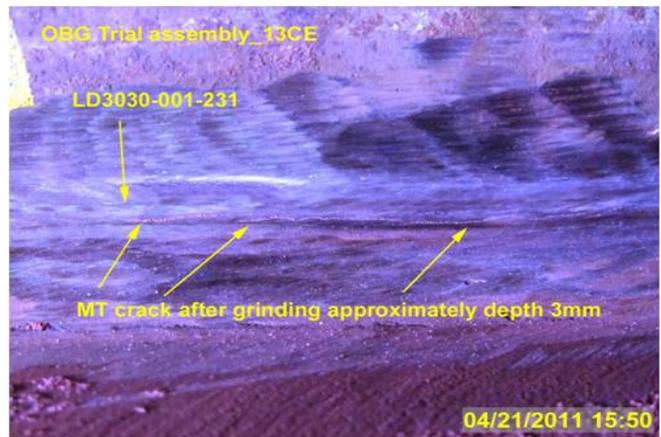
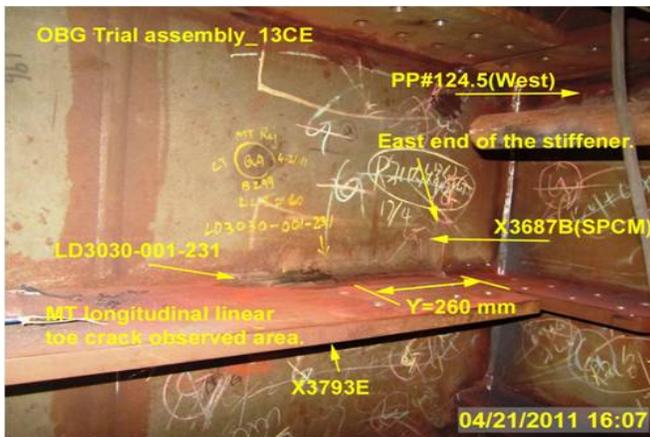
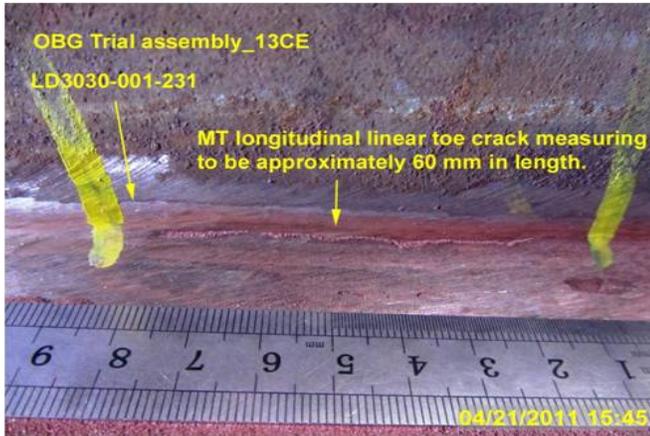
- One Longitudinal Linear toe crack measuring approximately 60 mm in length.
- The weld is identified as: LD3030-001-231.
- This weld is a fillet weld joining LD base plate (X3687B) to "I" Stiffener plate (X3793E).
- The LD base plate is designated as Seismic Performance Critical Material (SPCM) on approved shop drawing.
- The "Y" location is approximately 260 mm from East side of the weld termination (as shown on picture below).
- Both LD base plate and stiffener plate thickness is 25 mm.
- The crack is clearly marked on the material near the weld.
- Segment 13CE is currently located in the OBG Trial assembly area.
- The crack has been shown to ZPMC MT Technician prior to grinding process.
- This crack has been removed to an approximate depth of 5 mm.

The Notice of Witness Inspection Number (NWIT) is 08891. 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.

The attached photographs provide additional detail.

# 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:** Kelvin Cheung  
**Time and method of notification:** 0745, 4-21-11, Email  
**Name of Caltrans Engineer notified:** Sean Eagen  
**Time and method of notification:** 1600, 4-22-11, Email  
**QC Inspector's Name:** Mr. Wang Lu (Testino)  
**Was QC Inspector aware of the problem:** Yes No  
**Contractor's proposal to correct the problem:**  
NA  
**Comments:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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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 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:** 25-Apr-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:** 05.03.06-000954

**Subject:** NCR No. ZPMC-0955

**Reference Description:** Longitudinal Toe Crack Discovered by QA on Segment 13CE Longitudinal Diaphragm to Stiffener Fillet Weld

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) Longitudinal diaphragm (LD) LD3030A, this Quality Assurance Inspector (QA) discovered the following issue:

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- This crack has been removed to an approximate depth of 5 mm.

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### 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-0955

**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:** 05.03.06-000954

**Subject:** NCR No. ZPMC-0955

**Dated:** 04-May-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000947 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:**

Please see ZPMC response comments for NCR closure and provide the subject attached documents documenting objective evidence for NCR closure.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000947R00;

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**Caltrans' comments:**

**Status:** CLO

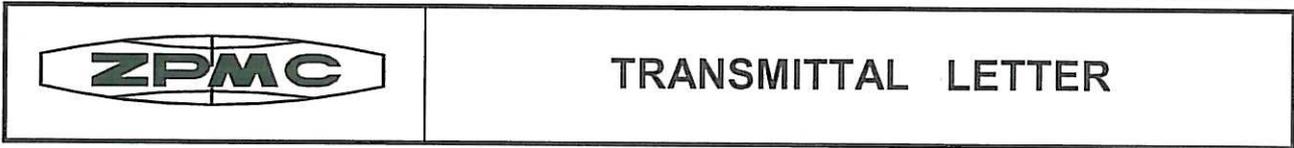
**Date:** 04-May-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0955 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 04-May-2011



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

DATE:2011-05-02

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-991

(02) NCR-000997(ZPMC-0955)

B787-MT-39564 R1

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER: 

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DATE: RECEIVED 02 MAY 2011  
14:38

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COMPANY: 

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PHONE NO.

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



No. B-991

## LETTER OF RESPONSE

**TO:** American Bridge/Flour

**DATE:** 2011-5-2

**REGARDING:** NCR-000997(ZPMC-0955)

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-000997(ZPMC-0955)

B787-MT-39564 R1

*Zhangwei.*  
*5/2/11*



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:** 25-Apr-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:** 05.03.06-000954

**Subject:** NCR No. ZPMC-0955

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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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- Non-Conformance Resolved.

**Material Location:** OBG

**Lift:** 13

### Remarks:

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**NCT**

*( Continued Page 2 of 2 )*

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**Transmitted by:** Sean Eagen      Transportation Engineer

**Attachments:**    ZPMC-0955

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

**File:** 05.03.06

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Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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, China**Report No:** NCR-000997**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Apr-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0955**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: Longitudinal Diaphragm to "I" StiffenerProcedural  Procedural  Description:

**Reference Description:** Longitudinal Toe Crack Discovered by QA on Segment 13CE Longitudinal  
Diaphragm to Stiffener Fillet Weld

**Description of Non-Conformance:**

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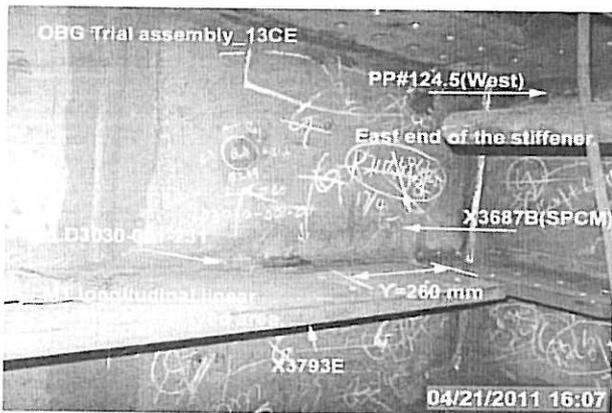
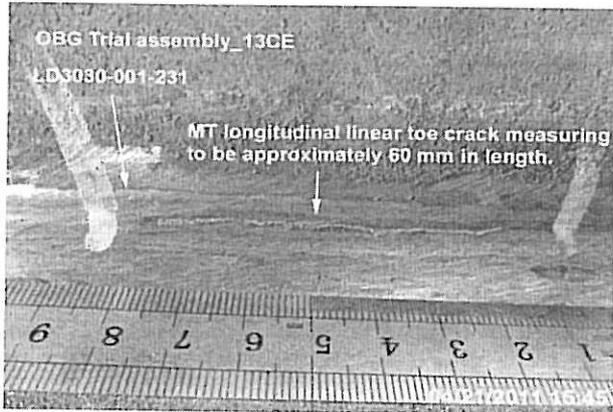
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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( 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”.

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Who discovered the problem: Surendra Prabhu  
Name of individual from Contractor notified: Kelvin Cheung  
Time and method of notification: 0745, 4-21-11, Email  
Name of Caltrans Engineer notified: Sean Eagen  
Time and method of notification: 1600, 4-22-11, Email  
QC Inspector's Name: Mr. Wang Lu (Testino)  
Was QC Inspector aware of the problem:  Yes  No  
Contractor's proposal to correct the problem:  
NA  
Comments:

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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<b>Inspected By:</b>	Devey,Jim	SMR
<b>Reviewed By:</b>	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-000963**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 05-May-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0955**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>Descriptor:</b>	

**Date the Non-Conformance Report was written:** 21-Apr-2011**Description of Non-Conformance:**

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The attached photographs provide additional detail.

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

Contractor will repair the indication, and provide the NDT report to prove the weld is acceptable.

**Corrective action taken:**

Contractor repaired the weld indication. The NDT report proved the repaired weld is acceptable. Internal NCR issued.

