

**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-000766**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0728**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> OBG Segment 8CE Edge Plate Stiffener
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** QA found an UT Indication after the contractor's had tested and accepted a weld for an Edge Plate to Stiffener weld in Segment 8CE

**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this QA Inspector discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length in the Complete Joint Penetration (CJP) "T" joint, joining Edge Plate EP88A (SPCM) to the under deck stiffener X8E.
- The indication D rating is +7.
- Material thickness is 25mm.
- The depth of the indication is approximately 13mm.
- The weld is identified as SEG048J-110 and is between panel point 69 and 70.
- The weld is designated as Seismic Performance Critical Material (SPCM).
- The indication is clearly marked near the weld.
- The Y distance for this indication was measured to be 5mm from the cope hole at the deck.
- Segment 8CE is located at Trial Assembly Yard.
- The Notice of Witness Inspection (NWIT) No. is 005977. The indication is located Within an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

---

---

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

---

---



**Applicable reference:**

AWS D1.5-02 Section 6; Table 6.3 specifies a class “A” indication as having a rating of 8db and under for material thicknesses 21mm through 38mm.

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:** Subhasis Bera

**Name of individual from Contractor notified:** Li Min Kit

**Time and method of notification:** 17:30\_06-14-10\_Email

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

**Time and method of notification:** 08:30\_6/15/10\_Verbal

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

**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.

---

<b>Inspected By:</b>	Tsang, Eric	SMR
----------------------	-------------	-----

<b>Reviewed By:</b>	Devey, Jim	SMR
---------------------	------------	-----

---



**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:** 15-Jun-2010

**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:** 05.03.06-000724

**Subject:** NCR No. ZPMC-0728

**Reference Description:** QA found an UT Indication after the contractor's had tested and accepted a weld for an Edge Plate to Stiffener weld in Segment 8CE

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:** 08

**Remarks:**

- During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this QA Inspector discovered the following issues:
- One (1) longitudinal linear indication measuring approximately 25mm in length in the Complete Joint Penetration (CJP) "T" joint, joining Edge Plate EP88A (SPCM) to the under deck stiffener X8E.
  - The indication D rating is +7.
  - Material thickness is 25mm.
  - The depth of the indication is approximately 13mm.
  - The weld is identified as SEG048J-110 and is between panel point 69 and 70.
  - The weld is designated as Seismic Performance Critical Material (SPCM).
  - The indication is clearly marked near the weld.
  - The Y distance for this indication was measured to be 5mm from the cope hole at the deck.
  - Segment 8CE is located at Trial Assembly Yard.
  - The Notice of Witness Inspection (NWIT) No. is 005977. The indication is located Within an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

**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:** Sean Eagen Transportation Engineer  
**Attachments:** ZPMC-0728

---

# NCT

( Continued Page 2 of 2 )

---

**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:** 05.03.06-000724

**Subject:** NCR No. ZPMC-0728

**Dated:** 12-Jul-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000725 Rev: 00

---

**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC has removed and repaired the indication and is providing NDT documentation to show the weld is acceptable.

ZPMC has removed and repaired the indication and is providing NDT documentation to show the weld is acceptable. ABFJV has discussed this letter of response with and ZPMC will adhere to the relevant inspection criteria when performing NDT and not add 2dB to the inspection criteria. To prevent future missed indications ZPMC will verify any indications which are on the border of being rejectable. Based on this documentation, ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000725R00;

---

**Caltrans' comments:**

**Status:** CLO

**Date:** 31-Aug-2010

The proposed resolution is acceptable. This NCR is considered closed.

**Submitted by:** Woo, Laraine

**Date:** 31-Aug-2010

**Attachment(s):**



No. B-819

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-7-11**

**REGARDING: NCR-000766(ZPMC-0728)**

ZPMC is providing the NDT record show the missed indication has been removed, repaired and retested to be acceptable. To prevent further missed UT indication; ZPMC inspector will increase +2dB than the criteria's requirement when performing UT testing. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

N CR-000766(ZPMC-0728)

B787-UT-13254 R2

A handwritten signature in black ink, appearing to be 'Lay' followed by a flourish.

7/11/10



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: 15-Jun-2010

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: 05.03.06-000724

Subject: NCR No. ZPMC-0728

**Reference Description:** QA found an UT Indication after the contractor's had tested and accepted a weld for an Edge Plate to Stiffener weld in Segment 8CE

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:** 08

### Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this QA Inspector discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length in the Complete Joint Penetration (CJP) "T" joint, joining Edge Plate EP88A (SPCM) to the under deck stiffener X8E.
- The indication D rating is +7.
- Material thickness is 25mm.
- The depth of the indication is approximately 13mm.
- The weld is identified as SEG048J-110 and is between panel point 69 and 70.
- The weld is designated as Seismic Performance Critical Material (SPCM).
- The indication is clearly marked near the weld.
- The Y distance for this indication was measured to be 5mm from the cope hole at the deck.
- Segment 8CE is located at Trial Assembly Yard.
- The Notice of Witness Inspection (NWIT) No. is 005977. The indication is located Within an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

### 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:** Sean Eagen Transportation Engineer

**Attachments:** ZPMC-0728

---

**NCT**

*( Continued Page 2 of 2 )*

---

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

**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-000766**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0728**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: OBG Segment 8CE Edge Plate StiffenerProcedural  Procedural  Description:

**Reference Description:** QA found an UT Indication after the contractor's had tested and accepted a weld for an Edge Plate to Stiffener weld in Segment 8CE

**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this QA Inspector discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length in the Complete Joint Penetration (CJP) "T" joint, joining Edge Plate EP88A (SPCM) to the under deck stiffener X8E.
- The indication D rating is +7.
- Material thickness is 25mm.
- The depth of the indication is approximately 13mm.
- The weld is identified as SEG048J-110 and is between panel point 69 and 70.
- The weld is designated as Seismic Performance Critical Material (SPCM).
- The indication is clearly marked near the weld.
- The Y distance for this indication was measured to be 5mm from the cope hole at the deck.
- Segment 8CE is located at Trial Assembly Yard.
- The Notice of Witness Inspection (NWIT) No. is 005977. The indication is located Within an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

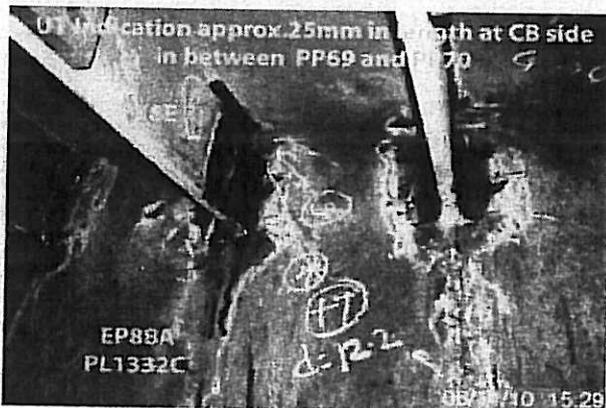
---

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

---

(Continued Page 2 of 2)

---



**Applicable reference:**

AWS D1.5-02 Section 6; Table 6.3 specifies a class "A" indication as having a rating of 8dbs and under for material thicknesses 21mm through 38mm.

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:** Subhasis Bera

**Name of individual from Contractor notified:** Li Min Kit

**Time and method of notification:** 17:30\_06-14-10\_Email

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

**Time and method of notification:** 08:30\_6/15/10\_Verbal

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

**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**

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.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000801**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 31-Aug-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0728**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:** 14-Jun-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this QA Inspector discovered the following issues:

-One (1) longitudinal linear indication measuring approximately 25mm in length in the Complete Joint Penetration (CJP) "T" joint, joining Edge Plate EP88A (SPCM) to the under deck stiffener X8E.

-The indication D rating is +7.

-Material thickness is 25mm.

-The depth of the indication is approximately 13mm.

-The weld is identified as SEG048J-110 and is between panel point 69 and 70.

-The weld is designated as Seismic Performance Critical Material (SPCM).

-The indication is clearly marked near the weld.

-The Y distance for this indication was measured to be 5mm from the cope hole at the deck.

-Segment 8CE is located at Trial Assembly Yard.

-The Notice of Witness Inspection (NWIT) No. is 005977. The indication is located Within an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

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

Perform weld repair with subsequent NDT verification.

**Corrective action taken:**

ZPMC has removed and repaired the indication and is providing NDT documentation to show the weld is acceptable.

**Did corrective action require Engineer's approval?** Yes No

**If so, name of Engineer providing approval:**

**Date:**

**Is Engineer's approval attached?**

---

---

## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

---

---

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

---

<b>Inspected By:</b>	Tsang, Eric	Quality Assurance Inspector
<b>Reviewed By:</b>	Wahbeh, Mazen	QA Reviewer

---