

**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-000528**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0501**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 12 Longitudinal Diaphragm Weld LD3008-001
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Missed UT Indication	

**Reference Description:** QA found UT Indication after the contractor's had tested and accepted this weld for Lift 12

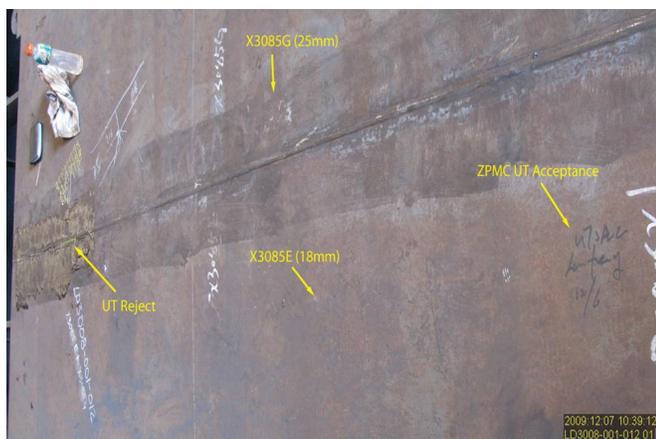
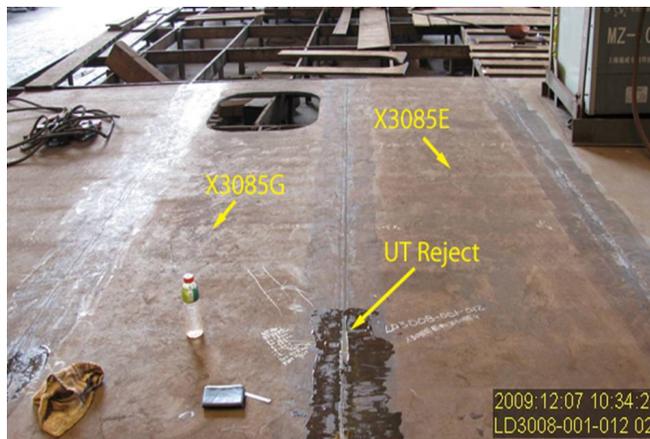
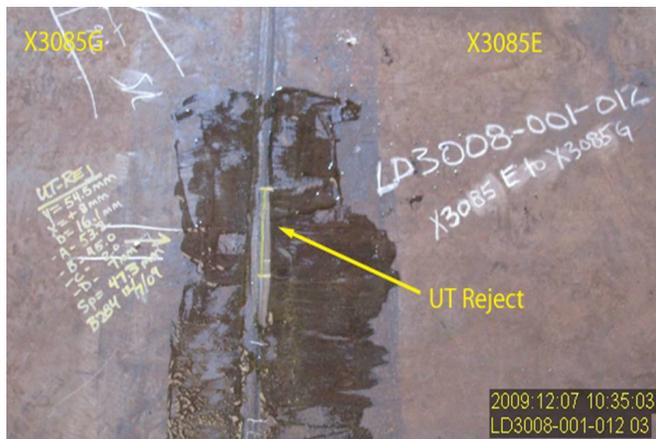
**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Longitudinal Diaphragm LD3008-001, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal indication measuring approximately 100mm in length, a depth of 16.2mm. The dB rating is a +7 and the material thickness is a transition from 18mm to 25mm. For additional information please see the UT report for this date.
- The weld is identified as: LD3008-001-012 for Lift 12.
- The Weld is a Complete Joint Penetration (CJP) butt weld joining the 18mm plate (X3085E), to the 25mm plate (X3085G).
- The member is located in Bay 3.
- The Notice of Witness Inspection Number (NWIT) is 004810. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100%) percent UT inspection of this weld.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )



## 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 Section 6.26.3.1; "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4."

AWS D1.5 Table 6.3

**Who discovered the problem:** Stefan Holmes

**Name of individual from Contractor notified:** Luo Gui Lin

**Time and method of notification:** 1000 hours, Verbal

**Name of Caltrans Engineer notified:** Ching Chao and Bill Howe

**Time and method of notification:** 1100 hours, Verbal

**QC Inspector's Name:** Yang Qing Feng

**Was QC Inspector aware of the problem:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Yes    No**

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

N/A

**Comments:**

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<b>Inspected By:</b>	Carreon,Albert	Lead Reviewer/Task Leader
<b>Reviewed By:</b>	Wahbeh,Mazen	SMR

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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**

333 Burma Road  
Oakland CA 94607  
Tel: Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

<b>To:</b>	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	<b>Date:</b>	24-Dec-2009
<b>Dear:</b>	Mr. Charles Kanapicki	<b>Contract No:</b>	04-0120F4 04-SF-80-13.2 / 13.9
<b>Attention:</b>	Mr. Thomas Nilsson Project/Fabrication Manager	<b>Job Name:</b>	SAS Superstructure
<b>Subject:</b>	NCR No. ZPMC-0501	<b>Document No:</b>	05.03.06-000489

**Reference Description:** QA found UT Indication after the contractor's had tested and accepted this weld for Lift 12

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:** 12

**Remarks:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Longitudinal Diaphragm LD3008-001, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal indication measuring approximately 100mm in length, a depth of 16.2mm. The dB rating is a +7 and the material thickness is a transition from 18mm to 25mm. For additional information please see the UT report for this date.
- The weld is identified as: LD3008-001-012 for Lift 12.
- The Weld is a Complete Joint Penetration (CJP) butt weld joining the 18mm plate (X3085E), to the 25mm plate (X3085G).
- The member is located in Bay 3.
- The Notice of Witness Inspection Number (NWIT) is 004810. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100%) percent UT inspection of this weld.

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

Submit a resolution for the identified non-conformance to the engineer for approval. Missed indications by ZPMC technicians is a chronic problem. Provide training with procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0501

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

**File:** 05.03.06

**NCR PROPOSED RESOLUTION**

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607  
**Attention:** Pursell, Gary  
Resident Engineer  
**Ref:** 05.03.06-000489  
**Subject:** NCR No. ZPMC-0501

**Dated:** 11-Jan-2010  
**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9  
**Job Name:** SAS Superstructure  
**Document No.:** ABF-NPR-000459 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** In the presence of the CT inspector, ZPMC ground the surface. The weld was re-UT'd immediately and found to be acceptable. ZPMC requests closure of this NCR.

This "missed indication" was interpreted to be a surface indication. In the presence of the CT inspector, ZPMC ground the surface. The weld was re-UT'd immediately and found to be acceptable. No weld repair was performed, no excessive time lapse during the grinding process. It is difficult to understand why this condition was elevated to an NCR when there was a cooperative relationship involved to quickly solve the problem immediately at the shop floor level. ZPMC requests closure of this NCR.

**Submitted by:** Lawton, Steve  
**Attachment(s):** ABF-NPR-000459R00;

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**Caltrans' comments:**

**Status:** CLO  
**Date:** 11-Jan-2010

Inspector confirms minor grinding. This NCR is closed.

**Submitted by:** Howe, Bill  
**Attachment(s):**

**Date:** 11-Jan-2010



No. B-549

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-1-5**

**REGARDING: NCR-000528(ZPMC-0501)**

With this letter of response, ZPMC requests withdraw of CT NCR-000528(ZPMC-0501) what mentioned that QA observed missed UT indication in weld ID: LD3008-001-012.

The indication found by this CT Inspector was confirmed to be reflection from weld's surface, and was removed by slight grinding. The CT inspector witnessed the grinding, re-UT and confirmed this weld's quality was sound.

ZPMC couldn't understand why a solved issue caused by misunderstanding was turned into NCR. Please confirm with this CT inspector and make a consideration to withdraw this NCR.

**ATTACHMENT:**

NCR-000528(ZPMC-0501)

  
1/5/10



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: 24-Dec-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  
 Document No: 05.03.06-000489

Subject: NCR No. ZPMC-0501

Reference Description: QA found UT Indication after the contractor's had tested and accepted this weld for Lift 12

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

**Remarks:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Longitudinal Diaphragm LD3008-001, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal indication measuring approximately 105mm in length, a depth of 16.2mm. The dB rating is a +7 and the material thickness is a transition from 18mm to 25mm. For additional information please see the UT report for this date.
- The weld is identified as: LD3008-001-012 for Lift 12.
- The Weld is a Complete Joint Penetration (CJP) butt weld joining the 18mm plate (X3085E), to the 25mm plate (X3085G).
- The member is located in Bay 3.
- The Notice of Witness Inspection Number (NWIT) is 00489. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100%) percent UT inspection of this weld.

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

Submit a resolution for the identified non-conformance to the engineer for approval. Missed indications by ZPMC technicians is a chronic problem. Provide training with procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0501

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

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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-000528

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Dec-2009

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

NCR #: ZPMC-0501

## Type of problem:

Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: Lift 12 Longitudinal Diaphragm Weld LD3008-001Procedural  Procedural  Description: Missed UT Indication

Reference Description: QA found UT Indication after the contractor's had tested and accepted this weld for Lift 12

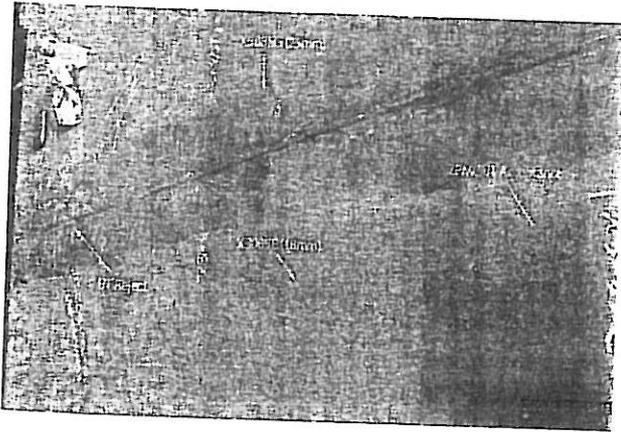
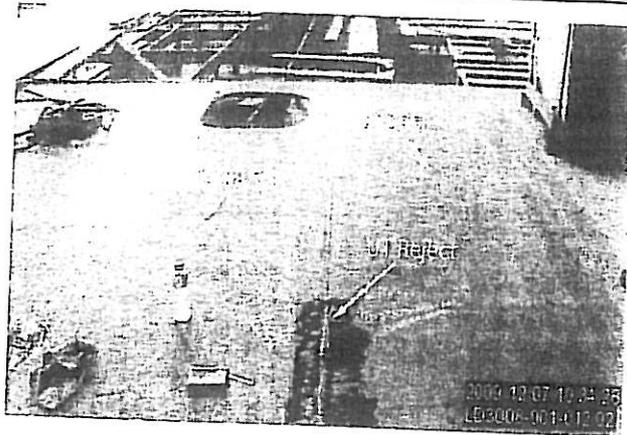
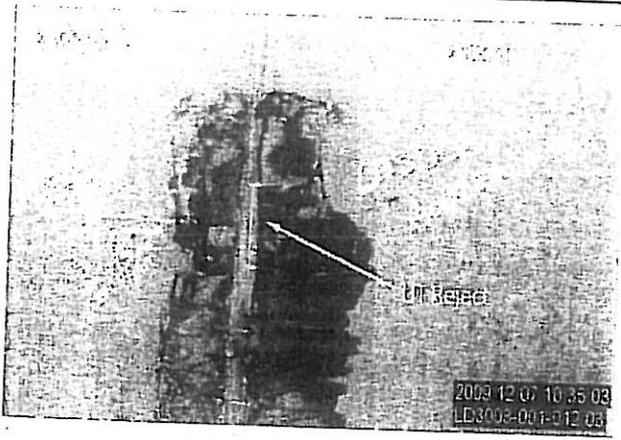
## Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Longitudinal Diaphragm LD3008-001, this Quality Assurance Inspector (QA) discovered the following issues:

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- The Notice of Witness Inspection Number (NWIT) is 004810. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100%) percent UT inspection of this weld.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



## 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 Section 6.26.3.1; "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4."

AWS D1.5 Table 6.3

Who discovered the problem: Stefan Holmes

Name of individual from Contractor notified: Luo Gui Lin

Time and method of notification: 1000 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Yang Qing Feng

Was QC Inspector aware of the problem:

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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(Continued Page 3 of 3)

Yes  No

Contractor's proposal to correct the problem:

N/A

**Comments:**

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**Inspected By:** Carreon, Albert

Lead Reviewer/Task Leader

**Reviewed By:** Wahbeh, Mazen

SMR

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**DEPARTMENT OF TRANSPORTATION**

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Office of Structural Materials

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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-000461**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 20-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0501**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:** 07-Dec-2009**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Longitudinal Diaphragm LD3008-001, this Quality Assurance Inspector (QA) discovered the following issues:

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-The Weld is a Complete Joint Penetration (CJP) butt weld joining the 18mm plate (X3085E), to the 25mm plate (X3085G).

-The member is located in Bay 3.

-The Notice of Witness Inspection Number (NWIT) is 004810. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100%) percent UT inspection of this weld.

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

Remove indication by grinding.

**Corrective action taken:**

Indication was removed by grinding. Magnetic Particle Testing was performed to verify the indication was removed completely.

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

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**Yes    No**

**Comments:**

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

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