

**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  
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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, P.R. China

**Report No:** NCR-000690

**Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Date:** 26-Feb-2010

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

**NCR #:** ZPMC-0657

### Type of problem:

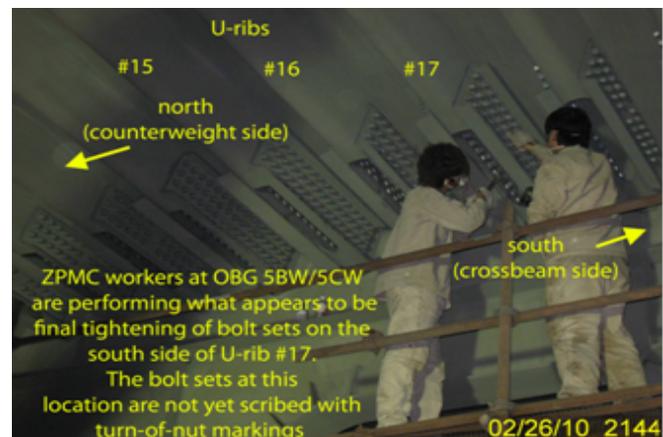
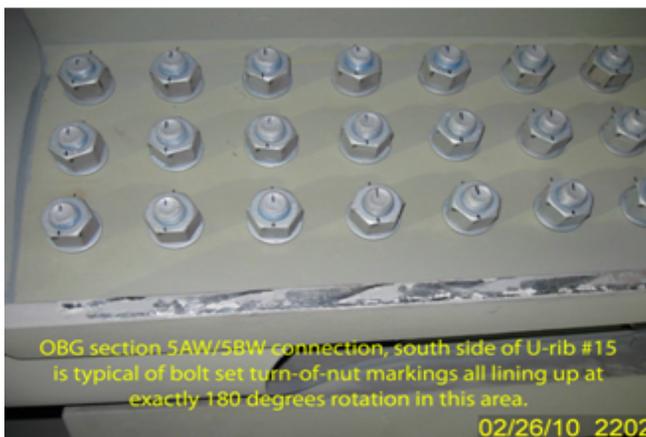
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Segment 5BW/5CW U-Rib Splicing
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Tightening the Bolts of U-Rib Splices not conforming to the approved procedure (Segment 5BW to 5CW)

### Description of Non-Conformance:

During in process inspection in OBG 5BW/5CW, Caltrans OSM Quality Assurance Inspector observed that the tightening of the bolts were not performed per the approved procedure.

- Marking bolts after final tension had been applied at U-rib #17 (see picture).
- ZPMC workers were performing final bolt tightening of ASTM A325 bolts by turn-of-nut specification of 180° to 210°.
- This issue is located at 5BW/5CW transverse seam at the deck plate U-rib stiffener splice plates.



### Applicable reference:

SFOBB Project HS Bolt Installation and Inspection Plan Section 6.3: "Tightening"

- 6.3.1 ...After preliminary tightening, match-mark each nut, bolt and steel surface in straight line.
- 6.3.2 Using Table 1, apply the required turns to perform final tightening. Bolt head shall be held when rotate the nut. When completed visually check the match-marks and compare with Table 1.

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Who discovered the problem:** George Goulet  
**Name of individual from Contractor notified:** Steve Lawton  
**Time and method of notification:** 1700 hours, 2/28/10, Email  
**Name of Caltrans Engineer notified:** Bill Howe, Ching Chao  
**Time and method of notification:** 1800 hours, 2/28/10, E-mail  
**QC Inspector's Name:** Lay Tao  
**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Tsang, Eric	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:** 01-Mar-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:** 05.03.06-000647

**Subject:** NCR No. ZPMC-0657

**Reference Description:** Tightening the Bolts of U-Rib Splices not conforming to the approved procedure (Segment 5BW to 5CW)

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:** 05

### Remarks:

- During in process inspection in OBG 5BW/5CW, Caltrans OSM Quality Assurance Inspector observed that the tightening of the bolts were not performed per the approved procedure.
- Marking bolts after final tension had been applied at U-rib #17 (see picture).
  - ZPMC workers were performing final bolt tightening of ASTM A325 bolts by turn-of-nut specification of 180° to 210°.
  - This issue is located at 5BW/5CW transverse seam at the deck plate U-rib stiffener splice plates.
- Please see attached NCR ZPMC No. 657 for details.

### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences and for remedy the non-conformance on the bolting procedure for the particular U-rib for the Engineer's review. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Ching Chao

**Attachments:** ZPMC-0657

**cc:** Rick Morrow, Gary Pursell, Stanley Ku, Ching Chao, Bill Howe

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000647

**Subject:** NCR No. ZPMC-0657

**Dated:** 03-Mar-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000605 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** All the bolts in U ribs on the North and South sides of #15,16, and 17 in OBG Lift 5BW/5CW were tested to ensure that they met the required torque of 435N\*M for tension verification.

All the bolts in U ribs on the North and South sides of #15,16, and 17 in OBG Lift 5BW/5CW were tested to ensure that they met the required torque of 435N\*M for tension verification. No nut or bolt was turned relative to its matching component by application of required torque. The verification was successful and on the approved bolting procedure and witnessed by a CT inspector, lot number B279. The proper bolting procedure has been reviewed with the bolting crew in question and ZPMC has issued an internal NCR. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000605R00

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### Caltrans' comments:

**Status:** CLO

**Date:** 07-Mar-2010

The documentation received is sufficient to close this NCR.

**Submitted by:** Howe, Bill

**Date:** 07-Mar-2010

**Attachment(s):**

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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, P.R. China**Report No:** NCS-000584**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0657**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:** 26-Feb-2010**Description of Non-Conformance:**

During in process inspection in OBG 5BW/5CW, Caltrans OSM Quality Assurance Inspector observed that the tightening of the bolts were not performed per the approved procedure.

-Marking bolts after final tension had been applied at U-rib #17 (see picture).

-ZPMC workers were performing final bolt tightening of ASTM A325 bolts by turn-of-nut specification of 180° to 210°.

-This issue is located at 5BW/5CW transverse seam at the deck plate U-rib stiffener splice plates.

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

Perform tension verification testing.

**Corrective action taken:**

Contractor performed tension verification testing for said bolts. The results of tension verification testing verify bolts meet Contract specifications. An internal NCR was issued by the Contractor in regards to this matter.

**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 Jim Simonis 152.1675.3703, who represents the Office of Structural Materials for your project.

**Inspected By:** Simonis, Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer