

**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 #: 04-0120F4  
 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-000956

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

**Date:** 26-Dec-2010

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

**NCR #:** ZPMC-0915

### Type of problem:

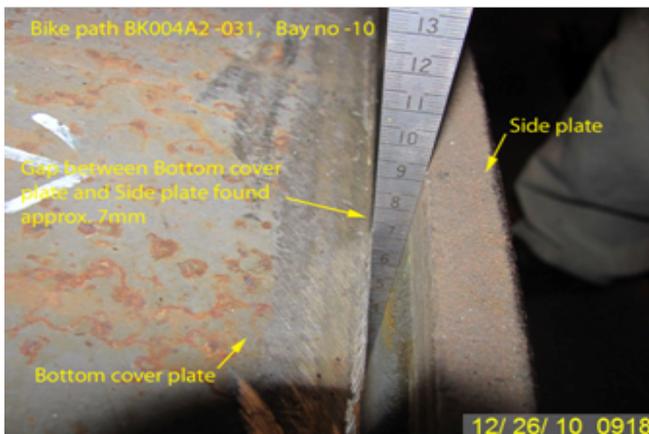
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Bike Path BK004A2 -031
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** ZPMC performed welding on a fillet weld joint with excessive root gaps at 2 weld joints on bikepath BK004A2-031

### Description of Non-Conformance:

During the Quality Assurance (QA) Inspection of Bike path, this QA Inspector discovered the following issue:

- The root gaps of 7mm were found between Bottom cover plate and Side plate of Bike path BK 004A2-031 at Y location from approximately 0 to 2000mm at 2 welds.
- At the time, plug welds of the cover plate and tack welds of the cover to side plates were completed.
- The welds are identified as BK004A2-031-013 and BK 004A2-031-021
- CT QA Inspector informed the Contractor's QC inspectors of this issue.
- The weld is a 6mm fillet weld joining, Bottom Plate (BKPL4A) to Side Plate (BKPL3A).
- Y location is approximately 2000 mm from BKPL6B, bottom diaphragm plate.
- Bikepath is located in Bay 10.
- Without resolving the excessive root gaps issue, ZPMC finished welding these fillet welds by not conforming to AWS D1.5 Section 3.3.1.



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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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### Applicable reference:

AWS D1.5 Section - 3.3.1 –“The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance.”

**Who discovered the problem:** Baskar Govindarajan

**Name of individual from Contractor notified:** Zhao Xian Wei

**Time and method of notification:** 10:00 hours, 12/26/10, Verbal

**Name of Caltrans Engineer notified:** Laraine Woo

**Time and method of notification:** 07:30 hours, 12/27/10, Email

**QC Inspector's Name:** Yu Zhi Lai

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

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

### 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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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

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

**Date:** 27-Dec-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:** 05.03.06-000912

**Subject:** NCR No. ZPMC-0915

**Reference Description:** ZPMC performed welding on a fillet weld joint with excessive root gaps at 2 weld joints on bikepath BK004A2-031

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:** Bike Path **Lift:**

**Remarks:**

- During the Quality Assurance (QA) Inspection of Bike path, this QA Inspector discovered the following issue:
- The root gaps of 7mm were found between Bottom cover plate and Side plate of Bike path BK 004A2-031 at Y location from approximately 0 to 2000mm at 2 welds.
  - At the time, plug welds of the cover plate and tack welds of the cover to side plates were completed.
  - The welds are identified as BK004A2-031-013 and BK 004A2-031-021
  - CT QA Inspector informed the Contractor's QC inspectors of this issue.
  - The weld is a 6mm fillet weld joining, Bottom Plate (BKPL4A) to Side Plate (BKPL3A).
  - Y location is approximately 2000 mm from BKPL6B, bottom diaphragm plate.
  - Bikepath is located in Bay 10.
  - Without resolving the excessive root gaps issue, ZPMC finished welding these fillet welds by not conforming to AWS D1.5 Section 3.3.1.

**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:** Laraine Woo Transportation Engineer

**Attachments:** ZPMC-0915

**cc:** Rick Morrow, Gary Pursell, 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:** 05.03.06-000912

**Subject:** NCR No. ZPMC-0915

**Dated:** 01-Mar-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000930 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** This non conformance was documented twice, see the response for ZPMC-0938 for closure.

This non conformance was documented twice, see the response for ZPMC-0938 for closure.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000930R00;

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**Caltrans' comments:**

**Status:** AAP

**Date:** 02-Mar-2011

This proposed resolution is Accepted with Action Pending. While the weld noted in NCR ZPMC-0915 are the same welds noted in NCR ZPMC-0938, the non-conformances are different. The NDT documentation provided with NCR ZPMC-0938 is acceptable for NCR ZPMC-0915 and no further action is require in this regard. However, ZPMC has not addressed the cause for apparent failure of Quality Control to identify the deficiency nor provided documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences. This still needs to be provided.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 02-Mar-2011

**DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF ENGINEERING SERVICES  
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 Quality Assurance and Source Inspection



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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-000956

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

**Date:** 26-Dec-2010

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

**NCR #:** ZPMC-0915

**Type of problem:**

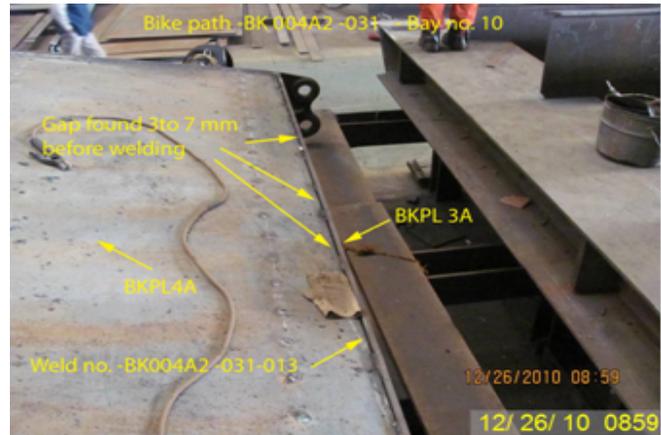
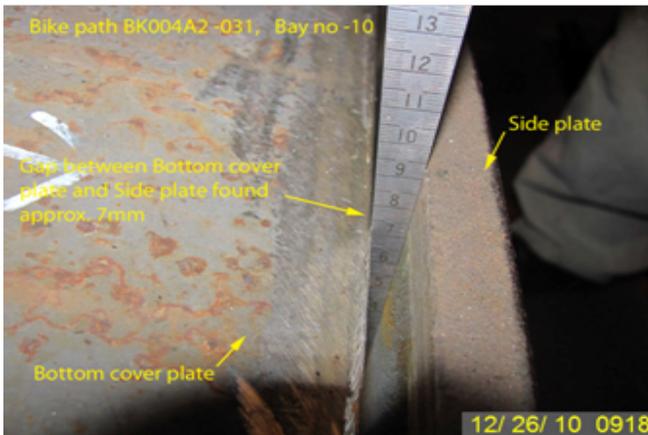
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Bike Path BK004A2 -031
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** ZPMC performed welding on a fillet weld joint with excessive root gaps at 2 weld joints on bikepath BK004A2-031

**Description of Non-Conformance:**

During the Quality Assurance (QA) Inspection of Bike path, this QA Inspector discovered the following issue:

- The root gaps of 7mm were found between Bottom cover plate and Side plate of Bike path BK 004A2-031 at Y location from approximately 0 to 2000mm at 2 welds.
- At the time, plug welds of the cover plate and tack welds of the cover to side plates were completed.
- The welds are identified as BK004A2-031-013 and BK 004A2-031-021
- CT QA Inspector informed the Contractor's QC inspectors of this issue.
- The weld is a 6mm fillet weld joining, Bottom Plate (BKPL4A) to Side Plate (BKPL3A).
- Y location is approximately 2000 mm from BKPL6B, bottom diaphragm plate.
- Bikepath is located in Bay 10.
- Without resolving the excessive root gaps issue, ZPMC finished welding these fillet welds by not conforming to AWS D1.5 Section 3.3.1.



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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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### Applicable reference:

AWS D1.5 Section - 3.3.1 –“The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance.”

**Who discovered the problem:** Baskar Govindarajan

**Name of individual from Contractor notified:** Zhao Xian Wei

**Time and method of notification:** 10:00 hours, 12/26/10, Verbal

**Name of Caltrans Engineer notified:** Laraine Woo

**Time and method of notification:** 07:30 hours, 12/27/10, Email

**QC Inspector's Name:** Yu Zhi Lai

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

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

### 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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Tsang, Eric	SMR
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<b>Reviewed By:</b>	Wahbeh, Mazen	SMR
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## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000912

**Subject:** NCR No. ZPMC-0915

**Dated:** 04-Mar-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000930 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** This non conformance was the result of ZPMC production not following the direction of the ZPMC's QC department to rectify the root gap issue and continuing to weld.

This non conformance was the result of ZPMC production not following the direction of the ZPMC's QC department to rectify the root gap issue and continuing to weld. ZPMC QA has issued an NCR on both the QC and Production teams involved to demonstrate that non conformances should be rectified when pointed out during the fabrication process. In addition to normal inspection, ZPMC and ABFJV will ensure the inspectors identify these types of situations in the future and prevent them from moving forward in production. Based on these actions and previously submitted documents, ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000930R01;;

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### Caltrans' comments:

**Status:** CLO

**Date:** 06-Mar-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0915 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 06-Mar-2011

## NCR PROPOSED RESOLUTION

**To:** California Department of Transportation  
333 Burma Road  
Oakland, CA 94607  
**Attention:** Siegenthaler, Peter  
Resident Engineer  
**Ref:** 05.03.06-000912  
**Subject:** NCR No. ZPMC-0915

**Dated:** 01-Mar-2011  
**Contract No.:** 04-0120F4  
04-SF-80-13.2/13.9  
**Job Name:** Self-Anchored Suspension Bridge  
**Document No:** ABF-NPR-000930 **Rev:** 0

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### Contractor's Proposed Resolution:

**Reference Resolution:** This non conformance was documented twice, see the response for ZPMC-0938 for closure.  
This non conformance was documented twice, see the response for ZPMC-0938 for closure.

**Submitted By:** Ishibashi, Joshua  
**Attachment(s):** ABF-NPR-000930R00;

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### Caltrans' comments:

Status: AAP

Date: 02-Mar-2011

This proposed resolution is Accepted with Action Pending. While the weld noted in NCR ZPMC-0915 are the same welds noted in NCR ZPMC-0938, the non-conformances are different. The NDT documentation provided with NCR ZPMC-0938 is acceptable for NCR ZPMC-0915 and no further action is require in this regard. However, ZPMC has not addressed the cause for apparent failure of Quality Control to identify the deficiency nor provided documentation of the steps/actions taken by the Quality Control Manager to prevent future occurrences. This still needs to be provided.

**Submitted By:** Eagan, Sean **Date:** 02-Mar-2011  
**Attachment(s):** ABF-NPR-000930

**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-000957**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0915**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:** 26-Dec-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Inspection of Bike path, this QA Inspector discovered the following issue:

-The root gaps of 7mm were found between Bottom cover plate and Side plate of Bike path BK 004A2-031 at Y location from approximately 0 to 2000mm at 2 welds.

-At the time, plug welds of the cover plate and tack welds of the cover to side plates were completed.

-The welds are identified as BK004A2-031-013 and BK 004A2-031-021

-CT QA Inspector informed the Contractor's QC inspectors of this issue.

-The weld is a 6mm fillet weld joining, Bottom Plate (BKPL4A) to Side Plate (BKPL3A).

-Y location is approximately 2000 mm from BKPL6B, bottom diaphragm plate.

-Bikepath is located in Bay 10.

-Without resolving the excessive root gaps issue, ZPMC finished welding these fillet welds by not conforming to AWS D1.5 Section 3.3.1.

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

Contractor considers this NCR refers to the same incidence referenced in NCR ZPMC-0938 which has been addressed and closed.

**Corrective action taken:**

Both NCR's ZPMC 938, 915 refer to same non-conformance. TC-RFI-0341R0 was submitted and the solution accepted.

**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:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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of Structural Materials for your project.

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**Inspected By:** Ng,Michael

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer

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