

**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, PRC**Report No:** NCR-000089**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 09-Mar-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0087**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> MUSB-MA 25 and MUSB-MA 26
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b>	89M Shear Link Assembly

**Description of Non-Conformance:**

American Bridge/Fluor allowed ZPMC to perform weld repairs utilizing the air carbon arc process without achieving the minimum required preheat temperature of 65°C, prior to excavation. The weld repairs took place at the flange to web connection. The surface temperature was approximately 15°C.

**Applicable reference:**

AWS D1.5 2002 section, 12.17.6 Repair Procedure Minimum Provisions. Part (3)

“The preheating temperature prior to air carbon arc gouging shall be described in the WPS. Preheat for gouging shall not be less than 65°C [150°F].”

**Who discovered the problem:** Greg Bertlesman, Quality Assurance Inspector**Name of individual from Contractor notified:****Time and method of notification:****Name of Caltrans Engineer notified:** Ching Chao, Structure Representative**Time and method of notification:** 3/10/08; 1000; Verbal**QC Inspector's Name:** Xu Le Fang, ZPMC QC Inspector**Was QC Inspector aware of the problem:** Yes No**Contractor's proposal to correct the problem:**

None at this time.

**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.

**Inspected By:** Wahbeh, Mazen

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer



**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**  
333 Burma Road  
Oakland CA 94607  
Tel: Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

**To:** American Bridge/Fluor Enterprises, a JV  
375 BURMA ROAD  
OAKLAND CA 95607

**Date:** 21-Mar-2008

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

**Dear:** Mr. Charles Kanapicki

**Job Name:** SAS Superstructure

**Attention:** Mr. Dave Williams Consultant

**Document No:** 05.03.06-000055

**Subject:** NCR No. ZPMC-0087

**Reference Description:** 89M Shear Link Assembly / Preheat

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 - No Response Required.

### Remarks:

**Material Location:** Tower

**Lift:**

### Non-Conformance:

American Bridge/Flour allowed ZPMC to perform weld repairs utilizing the air carbon arc process without achieving the minimum required preheat temperature of 65°C, prior to excavation. The weld repairs took place at the flange to web connection. The surface temperature was approximately 15°C.

### Action Required and/or Action Taken:

Please refer to the attached Non-Conformance Report for details.

**Transmitted by:** Scott Kennedy Sr. Bridge Engineer

**Attachments:** ZPMC-0087

**cc:** Rick Morrow, Gary Pursell, Mark Woods, Doug Coe, 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:** 05.03.06-000055

**Subject:** NCR No. ZPMC-0087

**Dated:** 24-Apr-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000031 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC QC will ensure that SPCM parts are at the proper temperature prior to air arc gouging

Please see the attached response from ZPMC. ABF JV has reviewed and concurs with this response and considers this issue resolved. ABF JV believes, based on our understanding of the NCT process that this NCR was issued closed as the top (first) box on the NCT was checked. Please confirm.

**Submitted by:** Kanapicki, Charles

**Attachment(s):** ABF-NPR-000031R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 25-Jun-2008

ZPMC has agreed to strengthen their monitoring of the weld repair process. Lack of sufficient preheat while carbon arc gouging SPCM material has no longer been an issue. The Department concurs that Non-Conformance ZPMC-0087 is closed.

Regarding the comment about ABF's understanding of the NCT process, each Non-Conformance requires a response unless the NCT form specifically states that the NCR is resolved.

**Submitted by:** Wright, Doug

**Attachment(s):**

**Date:** 25-Jun-2008

NCR 55

TL-000996

	<b>TRANSMITTAL LETTER</b>
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PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 04/02/2008

TO: RUBY LI/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: LETTER OF RESPONSE

REQUEST FOR REVIEW & SUBMITTAL TO CALTRANS.

ENCLOSED WITH THIS TRANSMITTAL IS

- (1) ONE COPY OF LETTER OF RESPONSE NO.CT-118
- (2) ONE COPY OF NCR-000089 / ZPMC ROT BSK 4/2/08

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:

*Ruby Li*

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PLAN HOLDER

*4/2/08 1312*

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DATE

*[Faint blue stamp]*

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COMPANY

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PHONE NO.

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



No. CT-118

## LETTER OF RESPONSE

**TO:** American Bridge/Flour JV

**DATE:** 2007-4-2

**REGARDING:** NCR-000089 (ZPMC-0087)

ZPMC received CT NCR-000089 on 24-Mar-2008, it mentioned ZPMC performed weld repairs utilizing the air carbon arc process without achieving the minimum required preheat temperature of 65°C, prior to excavation. As to this, ZPMC made the verification and the QC inspector denied he got any notification from CT. As there wasn't any SPCM mark on the blue drawing, it could be neglected the temperature requirement for the shear link part repairing easily. But it will be avoided during the production, the blue drawing has specified the SPCM part and ZPMC has been aware of this problem. Also, in the future ZPMC QC will make sure the SPCM parts will be fabricated and repaired by the right temperature requirement.

ZPMC requests Caltrans can withdraw NCR-000089 (ZPMC-0087).

**ATTACHMENT:**

NCR-000089 (ZPMC-0087)

*Wang* 2008-4-2

*Reviewed  
1/1  
ABF CCM  
10 APRIL 08*



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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, PRC

Report No: NCR-000089

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 09-Mar-2008

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

NCR #: ZPMC-0087

**Type of problem:**

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: MUSB-MA 25 and MUSB-MA 26  
 Procedural  Procedural  Descriptor: 89M Shear Link Assembly

**Description of Non-Conformance:**

American Bridge/Fluor allowed ZPMC to perform weld repairs utilizing the air carbon arc process without achieving the minimum required preheat temperature of 65°C, prior to excavation. The weld repairs took place at the flange to web connection. The surface temperature was approximately 15°C.

**Applicable reference:**

AWS D1.5 2002 section, 12.17.6 Repair Procedure Minimum Provisions. Part (3)

"The preheating temperature prior to air carbon arc gouging shall be described in the WPS. Preheat for gouging shall not be less than 65°C [150°F]."

Who discovered the problem: Greg Bertlesman, Quality Assurance Inspector

Name of individual from Contractor notified:

Time and method of notification:

Name of Caltrans Engineer notified: Ching Chao, Structure Representative

Time and method of notification: 3/10/08; 1000; Verbal

QC Inspector's Name: Xu Le Fang, ZPMC QC Inspector

Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

None at this time.

**Comments:**

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Inspected By: Wahbeh, Mazen

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer

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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, PRC**Report No:** NCS-000046**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 19-May-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0087**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:** 09-Mar-2008**Description of Non-Conformance:**

American Bridge/Fluor allowed ZPMC to perform weld repairs utilizing the air carbon arc process without achieving the minimum required preheat temperature of 65°C, prior to excavation. The weld repairs took place at the flange to web connection. The surface temperature was approximately 15°C.

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

None at this time.

**Corrective action taken:**

The mockup drawings had not specified SPCM status and therefore SPCM requirements such as 65°C preheat prior to carbon-arc-cutting had not been enforced. Production drawings have been verified to specify SPCM and SPCM techniques will be used during production.

**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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**Inspected By:** McReynolds, Robert

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer