

**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-000507

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

**Date:** 16-Nov-2009

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

**NCR #:** ZPMC-0480

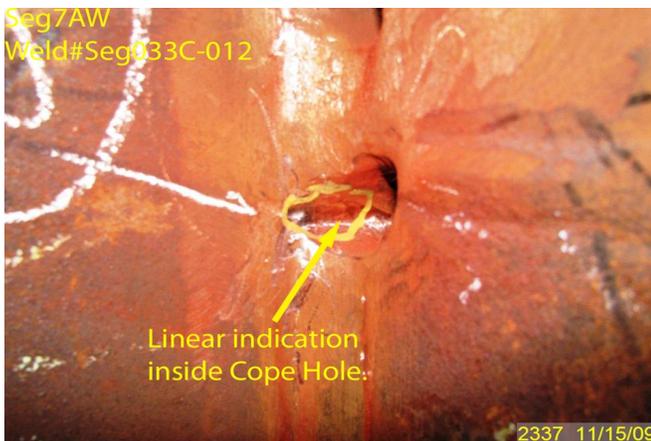
### Type of problem:

<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 7AW Weld near Floorbeam and LD
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Missed MT indication by QC	

**Reference Description:** Linear Indication found by MT inside a Cope in 7AW after contractor's acceptance

### Description of Non-Conformance:

During random Magnetic Particle Testing (MT) verification at segment 7AW, Caltrans Quality Assurance (QA) Inspector discovered a linear indication inside the cope hole of weld # SEG033C-012. The indication was measured at 15mm in length. This weld was previously tested and accepted by ZPMC QC MT.



### 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 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.

**Who discovered the problem:** Hiranch Patel

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Name of individual from Contractor notified:** Peter Shaw

**Time and method of notification:** 1030 hours, Verbal

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

**Time and method of notification:** 1430 hours, Verbal

**QC Inspector's Name:** Zhang Wei

**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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**Inspected By:** Carreon,Albert

Lead Reviewer/Task Leader

**Reviewed By:** 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:** 11-Dec-2009

**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:** 05.03.06-000470

**Subject:** NCR No. ZPMC-0480

**Reference Description:** Linear Indication found by MT inside a Cope in 7AW after contractor's acceptance

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:** 07

**Remarks:**

During random Magnetic Particle Testing (MT) verification at segment 7AW, Caltrans Quality Assurance (QA) Inspector discovered a linear indication inside the cope hole of weld # SEG033C-012. The indication was measured at 15mm in length. This weld was previously tested and accepted by ZPMC QC MT.

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

Submit a repair procedure to the engineer for approval. Missed MT indications have become a chronic problem. Provide the appropriate MT technician training so these occurrences can be minimized.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0480

**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:** 05.03.06-000470

**Subject:** NCR No. ZPMC-0480

**Dated:** 18-Jan-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000497 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster. The ABF QCM has been discussing missed MT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. Preliminary findings have resulted in ZPMC taking immediate action by performing 100% overchecks of the previously tested areas beginning the week of 18 January 09 as a means of preventing future NCR's for missed indications. ABF has purchased powder dispensers for all the ZPMC MT technicians as a means to help control the amount of powder applied during MT testing. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000497R00;

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### Caltrans' comments:

**Status:** AAP

**Date:** 25-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

**Submitted by:** Chao, Ching

**Date:** 25-Jan-2010

**Attachment(s):**

# Tool Box Training Agenda

**Subject:** MT Techniques

**Reason for Training:** Several CT NCR's of indications missed during ZPMC NDT inspection.

## 1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical shock

## 2. Tools

- a. Lighting
- b. MT Powder.                      Red for ambient,      Yellow for High Temperature.
- c. Powder Bulb
- d. Powder Blower
- e. MT Yoke                              Adequate working condition
- f. Pie Gage

## 3. Inspection Techniques

- a. Lighting
- b. Position of body (distance of eyes to the weld surface)
- c. Application of Powder      removal of Powder
- d. Continuous method
- e. Two directions
- f. Both sides of weld
- g. Clean and dry surface



教育培训纪录

培训编号: MT-22-Dec-09

培训内容:	MT Techniques
培训对象:	项目质检
授课人员:	Steve Lawton
培训类型:	内部培训
培训时间:	22-Dec-09 5:00 PM
计划培训地点:	ZPMC QC office

人员签到:

姓名	部门	姓名	部门
孙力杰 Sunlei	钢桥	狄坤伦 Di Kunlun	钢桥
孙广强 Sun Guangqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Chunqiang	钢桥
卞源源 Bian Yuanyuan	钢桥	顾云武 Gu Yunwu	钢桥
许兵 Xu Bing	钢桥	金建廷 Jin Jianting	钢桥 MT
李振华 Li Zhenhua	钢桥	常方杰 Chang Fangjie	钢桥
李坤阳 Li Xunyang	QA	袁俊 Yuan Jun	钢桥
王威 Wang Wei	钢桥	刘章敏 Liu Zhangmin	
孙林 Sun Lin	钢桥 MT	徐华祥 Xu Huaxiang	钢桥
丁阿成 Ding A Cheng	钢桥 MT	周东超 Zhou Dongchao	钢桥
贺佳佳 He Jiajia	钢桥	赵成功 Zhao Cheng Gong	钢桥
黄瑞 Huang Rui	钢桥	孙广强 Sun Guangqiang	钢桥
李黎明 Li Liming	钢桥	徐辉 Xu Hui	钢桥
李昌涛 Li Changtao		刘宏斌 Liu Hongbin	

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000470

**Subject:** NCR No. ZPMC-0480

**Dated:** 20-Apr-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000497 **Rev:** 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has repaired the indication in accordance with B-CWR929 and is providing documentation to show that the weld is acceptable. Based on this ZPMC is requesting closure of this NCR.

ZPMC has repaired the indication in accordance with B-CWR929 and is providing documentation to show that the weld is acceptable. Based on this ZPMC is requesting closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000497R01;

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### Caltrans' comments:

**Status:** CLO

**Date:** 25-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0480 is closed.

**Submitted by:** Eagen, Sean

**Date:** 25-Apr-2010

**Attachment(s):**



No. B-729

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-4-14**

**REGARDING: NCR-000507(ZPMC-0480)**

ZPMC acknowledged that an indication was missed and has written an internal NCR. B-CWR929 was issued reflecting to this indication. ZPMC is providing NDT record which shows that the weld is now acceptable. After NDT verification this issue has been removed from punchlist by CT's representative. Based on this ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000507(ZPMC-0480)

B787-MT-15622 R1

A handwritten signature in black ink, appearing to be "J. M. ...", is located below the attachment list.

4/14/10



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:** 11-Dec-2009

**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:** 05.03.06-000470

**Subject:** NCR No. ZPMC-0480

**Reference Description:** Linear Indication found by MT inside a Cope in 7AW after contractor's acceptance

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### Action Required and/or Action Taken:

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**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0480

**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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690 Walnut Ave. St. 150  
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Contract #: 04-0120F4

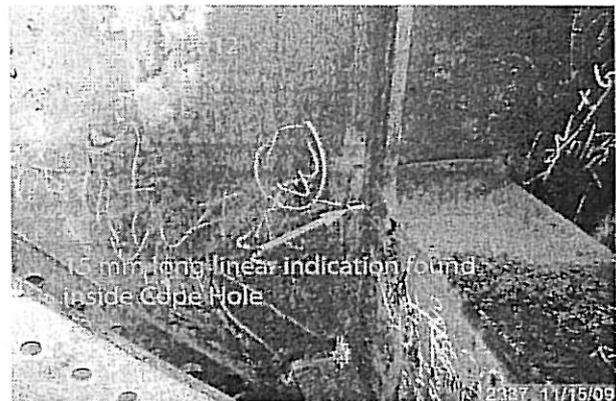
Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

**Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000507**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 16-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0480**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  **Bridge No:** 34-0006Joint fit-up  Coating  Other  **Component:** Segment 7AW Weld near Floorbeam and LDProcedural  Procedural  **Description:** Missed MT indication by QC**Reference Description:** Linear Indication found by MT inside a Cope in 7AW after contractor's acceptance**Description of Non-Conformance:**

During random Magnetic Particle Testing (MT) verification at segment 7AW, Caltrans Quality Assurance (QA) Inspector discovered a linear indication inside the cope hole of weld # SEG033C-012. The indication was measured at 15mm in length. This weld was previously tested and accepted by ZPMC QC MT.

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-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 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.

**Who discovered the problem:** Hiranch Patel

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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**Name of individual from Contractor notified:** Peter Shaw  
**Time and method of notification:** 1030 hours, Verbal  
**Name of Caltrans Engineer notified:** Ching Chao and Bill Howe  
**Time and method of notification:** 1430 hours, Verbal  
**QC Inspector's Name:** Zhang Wei  
**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>	Carreon, Albert	Lead Reviewer/Task Leader
<b>Reviewed By:</b>	Wahbeh, Mazen	SMR

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**DEPARTMENT OF TRANSPORTATION**

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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-000649**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0480**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:** 16-Nov-2009**Description of Non-Conformance:**

During random Magnetic Particle Testing (MT) verification at segment 7AW, Caltrans Quality Assurance (QA) Inspector discovered a linear indication inside the cope hole of weld # SEG033C-012. The indication was measured at 15mm in length. This weld was previously tested and accepted by ZPMC QC MT.

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

Repair said indication and perform NDT required to verify weld quality.

**Corrective action taken:**

Contractor submitted NDT records verifying the weld is in conformance with Contract weld quality requirements. An internal NCR was issued by the Contractor in regards to this issue in addition to providing supplemental training to NDT technicians.

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

**Inspected By:** Simonis, Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer