

**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-000631**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0604**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 8CW LD and FB
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Missed MT indication by QC	

**Reference Description:** Missed Longitudinal and Transverse MT Linear Indications by QC in Segment 8CW LD and FB

**Description of Non-Conformance:**

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

-Weld #SSD10-PP68-101 (SPCM): Two (2) Transverse linear indications measuring approximately 15mm and 4mm. Members are identified as FB11C (X46B) Non SPCM to SP158A (PL548A) SPCM.

-Weld #SEG047F-002 (SPCM): One (1) Longitudinal linear indication measuring approximately 15 mm. Members are identified as FB19B (X49F) SPCM to LD4 (X75G) Non SPCM.

-Weld #SEG047F-014 (non SPCM): One (1) Transverse linear indication measuring approximately 15 mm. Members are identified as LD4 (X75G) Non SPCM to FB19B (X7M) Non SPCM.

-Weld #SP447A-063 (SPCM): One (1) Transverse linear indication measuring approximately 8 mm. Members are identified as FB19B (X12C) SPCM to Side Plate 'I' Stiffener (RS91GB) Non SPCM.

-Weld #SSD10A-PP68-144 (SPCM): One (1) Longitudinal linear indication measuring approximately 13 mm. Members are identified as FB19B (X12C) SPCM to Deck Plate 'I' Stiffener (RS62GA) Non SPCM.

-Weld Connecting Drip plate to Floor Beam (FB27A) at Panel Point PP70 (Cross Beam Side) (SPCM): One (1) Transverse linear indication measuring approximately 17 mm. Members are identified as Drip plate (329M) Non SPCM to Floor Beam FB27A (X12D) Seismic Performance Critical Material (SPCM). This weld does not appear to be identified by number on the contractors weld maps.

-All indications are clearly marked on the material near the weld. For details, see Magnetic particle Testing (MT) report generated by this QA for this date.

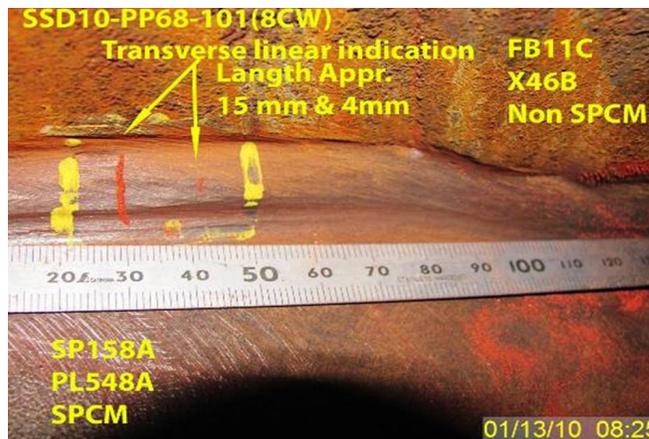
-OBG segment 8CW is located outside west of the Blast Shop area.

-The Notice of Witness Inspection Number (NWIT) is 005037. The indications are located inside an area that

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )

has been previously tested by ZPMC Quality Control (QC) personnel.



## 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

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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cracks.

**Who discovered the problem:** Sabhasis Bera

**Name of individual from Contractor notified:** Wang Chao

**Time and method of notification:** 1630 hours, 01-13-10, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 0845 hours, 01-14-10, 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**

<b>To:</b>	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	<b>Date:</b>	14-Jan-2010
<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-0604	<b>Document No:</b>	05.03.06-000594

**Reference Description:** Missed Longitudinal and Transverse MT Linear Indications by QC in Segment 8CW LD and FB

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:** 08

**Remarks:**

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

- Weld #SSD10-PP68-101 (SPCM): Two (2) Transverse linear indications measuring approximately 15mm and 4mm. Members are identified as FB11C (X46B) Non SPCM to SP158A (PL548A) SPCM.
- Weld #SEG047F-002 (SPCM): One (1) Longitudinal linear indication measuring approximately 15 mm. Members are identified as FB19B (X49F) SPCM to LD4 (X75G) Non SPCM.
- Weld #SEG047F-014 (non SPCM): One (1) Transverse linear indication measuring approximately 15 mm. Members are identified as LD4 (X75G) Non SPCM to FB19B (X7M) Non SPCM.
- Weld #SP447A-063 (SPCM): One (1) Transverse linear indication measuring approximately 8 mm. Members are identified as FB19B (X12C) SPCM to Side Plate 'I' Stiffener (RS91GB) Non SPCM.
- Weld #SSD10A-PP68-144 (SPCM): One (1) Longitudinal linear indication measuring approximately 13 mm. Members are identified as FB19B (X12C) SPCM to Deck Plate 'I' Stiffener (RS62GA) Non SPCM.
- Weld Connecting Drip plate to Floor Beam (FB27A) at Panel Point PP70 (Cross Beam Side) (SPCM): One (1) Transverse linear indication measuring approximately 17 mm. Members are identified as Drip plate (329M) Non SPCM to Floor Beam FB27A (X12D) Seismic Performance Critical Material (SPCM). This weld does not appear to be identified by number on the contractors weld maps.
- All indications are clearly marked on the material near the weld. For details, see Magnetic particle Testing (MT) report generated by this QA for this date.
- OBG segment 8CW is located outside west of the Blast Shop area.
- The Notice of Witness Inspection Number (NWIT) is 005037. The indications are located inside an area that has been previously tested by ZPMC Quality Control (QC) personnel.

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# NCT

( Continued Page 2 of 2 )

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## Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Missed Mt indications are a chronic problem. Provide training and equipment as required to ensure that these indications are found by the ZPMC MT technician that missed them. Provide documentation of such training to the engineer. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe      Sr. Transportation Engineer

**Attachments:**    ZPMC-0604

**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:** 05.03.06-000594

**Subject:** NCR No. ZPMC-0604

**Dated:** 08-Feb-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000557 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** The ABFJV QCM has instituted training sessions for ZPMC inspectors. In addition to training, ABF has purchased new equipment to standardize both ABF and ZPMC with the equipment used by Caltrans.

ZPMC and ABFJV have taken steps to reduce the number of both MT and UT missed indications. The ABFJV QCM has instituted training sessions for ZPMC inspectors to reinforce key points of performing UT and MT, the most recent was held in December 2009. The ZPMC Level III has conducted training with the inspectors as well. In addition to training, ABF has purchased new equipment to standardize both ABF and ZPMC with the equipment used by Caltrans. Examples of this are the powder bulbs with magnetic caps, and the same transducers used by Caltrans. Documents of the acceptable NDT will be provided when they are available at a later date. Based on this ZPMC requests that this NCR be approved with actions pending.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000557R00;

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**Caltrans' comments:**

**Status:** AAP

**Date:** 08-Feb-2010

AAP approved.

**Submitted by:** Howe, Bill

**Date:** 08-Feb-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 Chenggong	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	



教育培训纪录

培训编号:

培训内容:	UT复习培训教程 UT Techniques
培训对象:	ZPMC UT GUYS
授课人员:	STEVE LAWTON
培训类型:	UT Refresher Training Agenda
培训时间:	2009. 12. 24. 16:30
计划培训地点:	ZPMC NDT OFFICE

人员签到:

姓名	部门	姓名	部门
戴建 dai jian	江江 Jiang Jiang		
薛宇 xue yu	黄廷 Huang Ting		
马志长 ma zhi chang	黄廷 Huang Ting		
谭善 tan shan	李黎明 Li Liming		
马建 ma jian	李黎明 Li Liming		
王福 wang fu	徐军 Xu Jun		
沈健 shen jian	李黎明 Li Liming		
黄江 Huang Jiang			
金峰 jin feng			
吴文 wu wen			
解文 jie wen			
周海周 zhou hai zhou			
徐峰 xu feng			

# UT Refresher Training Agenda

**Subject:** UT Techniques

**Reason for Training:** Several CT NCR's for missed UT indications

1. **Safety**
  - a. Safety Glasses
  - b. Gloves (if required)
  - c. Knee Pads
  - d. Electrical Shock
  
2. **Tools**
  - a. Calibrated UT Machine      condition of machine
  - b. Coaxial cable                      condition of cable
  - c. Transducer                      condition of transducer
  - d. IIW Block
  - e. Scraper
  - f. UT couplant
  
3. **Inspection Techniques**
  - a. Surface preparation
  - b. Location of weld                      UT from beveled plate
  - c. Scanning patterns
  - d. Correct choice of Angles
  - e. Calibration                      per ZPMC procedure at regular intervals
  - f. Scanning speed
  - g. Know where your sound is at.... First leg, second leg etc...
  
4. **Inspection Criteria**
  - a. Table 6.3 or Table 6.4
  - b. Are surface inspections complete      VT and or MT should always occur before UT
  - c. Scanning Levels
  - d. Criteria dictated by the thinner of the two members
  - e. Planar flaws

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000594

**Subject:** NCR No. ZPMC-0604

**Dated:** 20-May-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000557 Rev: 01

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC has repaired the noted indications and is providing NDT reports to show that the welds are acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the noted indications and is providing NDT reports to show that the welds are acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000557R01;

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**Caltrans' comments:**

**Status:** AAP

**Date:** 26-May-2010

This proposed resolution is accepted, action pending. Please provide NDT results for the repair of the weld connecting the drip plate to the FL3 floorbeam.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 26-May-2010



No. B-764

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-5-20**

**REGARDING: NCR-000631(ZPMC-0604)**

ZPMC is providing the NDT records show the indications have been removed and repaired and the welds are now acceptable. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000631(ZPMC-0604)

B787-MT-22774 R1

B787-MT-22775 R1

B787-MT-18002 R1

B787-MT-22773 R1

*Jan W*  
*5/20/10*



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: 14-Jan-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: 05.03.06-000594

Subject: NCR No. ZPMC-0604

Reference Description: Missed Longitudinal and Transverse MT Linear Indications by QC in Segment 8CW LD and FB

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: 08

### Remarks:

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

- Weld #SSD10-PP68-101 (SPCM): Two (2) Transverse linear indications measuring approximately 15mm and 4mm. Members are identified as FB11C (X46B) Non SPCM to SP158A (PL548A) SPCM.
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- All indications are clearly marked on the material near the weld. For details, see Magnetic particle Testing (MT) report generated by this QA for this date.
- OBG segment 8CW is located outside west of the Blast Shop area.
- The Notice of Witness Inspection Number (NWIT) is 005037. The indications are located inside an area that has been previously tested by ZPMC Quality Control (QC) personnel.

02.02.15.04  
NCT-05.03.06-000594,NCT

Received  
NCT-000594 14 Jan 10 Page 1 of 2

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## NCT

( Continued Page 2 of 2 )

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### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Missed Mt indications are a chronic problem. Provide training and equipment as required to ensure that these indications are found by the ZPMC MT technician that missed them. Provide documentation of such training to the engineer. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe      Sr. Transportation Engineer

Attachments:    ZPMC-0604

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

File: 05.03.06

**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-000631

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Jan-2010

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

NCR #: ZPMC-0604

### Type of problem:

Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: Segment 8CW LD and FBProcedural  Procedural  Description: Missed MT indication by QC

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### Description of Non-Conformance:

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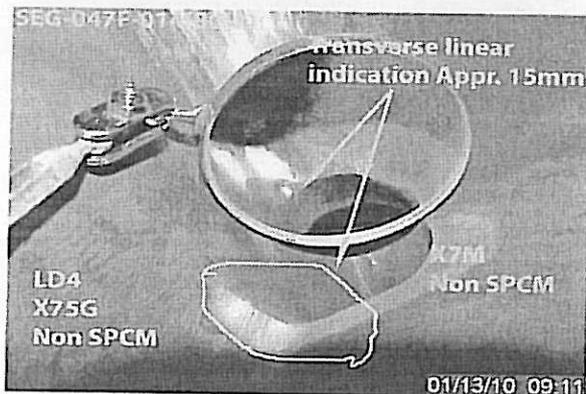
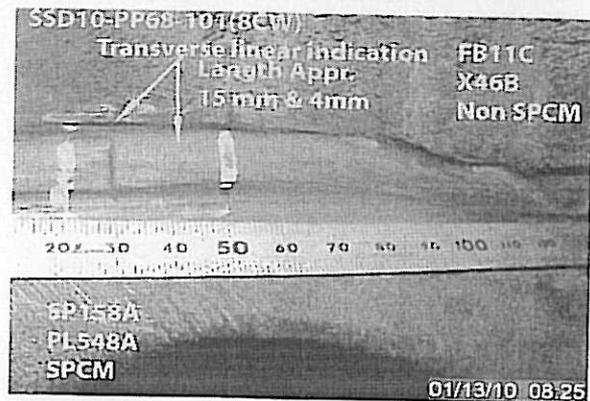
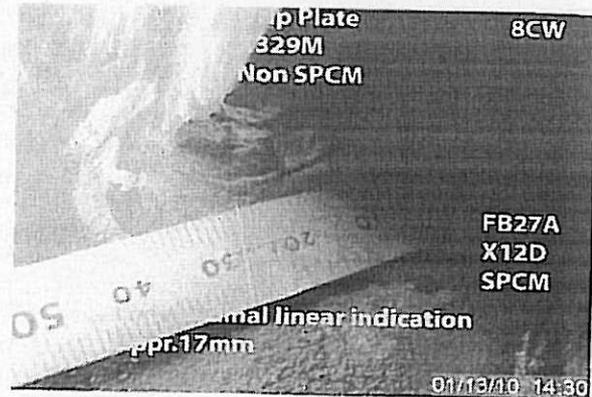
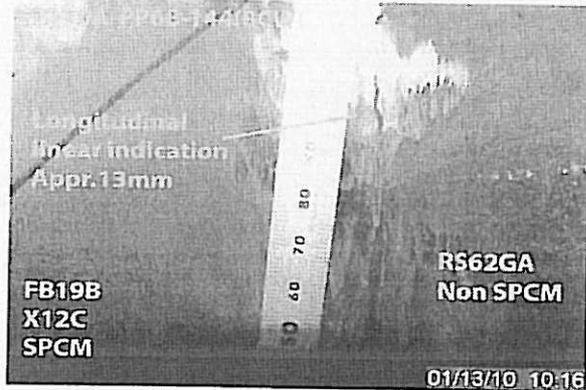
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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)

has been previously tested by ZPMC Quality Control (QC) personnel.



**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

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 3 of 3 )

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cracks.

**Who discovered the problem:** Sabhasis Bera

**Name of individual from Contractor notified:** Wang Chao

**Time and method of notification:** 1630 hours, 01-13-10, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 0845 hours, 01-14-10, 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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# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-22774R1      DATE日期 2010.05.20      PAGE OF页码 1/1      Revision No: 0

PROJECT NO. 工程编号: ZP06-787      CONTRACTOR: 用户: CALTRANS

DRAWING NO. 图号: SSD10(A) 8CW FLOOR BEAM SPLICE      CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4

REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010
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EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
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MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
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PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
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MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345 8/12/22/30mm
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WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	T JOINT
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WELD I.D. 焊缝编号	DISCONTINUITY 不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
SSD10-PP68-101	1R1			ACC.		100%MT
	2R1			ACC.		100%MT
SSD10A-PP68-144	1R1			ACC.		100%MT

AFTER B-CWR1516 REV0, B-CWR1517 REV0

BLANK

EXAMINED BY 主探 Ding a cheng / Ding A cheng 20/0.05.20	REVIEWED BY 审核 Sun Gong cheng 20/0.05.20
LEVEL-II SIGN 签字 / DATE 日期	LEVEL-II SIGN 签字 / DATE 日期
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE







## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000594

**Subject:** NCR No. ZPMC-0604

**Dated:** 12-Jul-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000557 Rev: 02

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC is including previously omitted NDT documentation. Based on this and previously submitted NDT documentation, ZPMC requests closure of this NCR.

ZPMC is including previously omitted NDT documentation. Based on this and previously submitted NDT documentation, ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000557R02;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 13-Jul-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0604 is closed.

**Submitted by:** Woo, Laraine

**Date:** 13-Jul-2010

**Attachment(s):**



No. B-818

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-7-11**

**REGARDING: NCR-000631(ZPMC-0604)**

Based on the attached NDT record and the previously submitted reports, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000631(ZPMC-0604)

B787-MT-24458 R1

*Log W*

*7/11/10*



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: 14-Jan-2010

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

Dear: Mr. Charles Kanapicki  
Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
Subject: NCR No. ZPMC-0604

Job Name: SAS Superstructure  
Document No: 05.03.06-000594

Reference Description: Missed Longitudinal and Transverse MT Linear Indications by QC in Segment 8CW LD and FB

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: 08

### Remarks:

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

- Weld #SSD10-PP68-101 (SPCM): Two (2) Transverse linear indications measuring approximately 15mm and 4mm. Members are identified as FB11C (X46B) Non SPCM to SP158A (PL548A) SPCM.
  - Weld #SEG047F-002 (SPCM): One (1) Longitudinal linear indication measuring approximately 15 mm. Members are identified as FB19B (X49F) SPCM to LD4 (X75G) Non SPCM.
  - Weld #SEG047F-014 (non SPCM): One (1) Transverse linear indication measuring approximately 15 mm. Members are identified as LD4 (X75G) Non SPCM to FB19B (X7M) Non SPCM.
  - Weld #SP447A-063 (SPCM): One (1) Transverse linear indication measuring approximately 8 mm. Members are identified as FB19B (X12C) SPCM to Side Plate 'I' Stiffener (RS91GB) Non SPCM.
  - Weld #SSD10A-PP68-144 (SPCM): One (1) Longitudinal linear indication measuring approximately 13 mm. Members are identified as FB19B (X12C) SPCM to Deck Plate 'I' Stiffener (RS62GA) Non SPCM.
  - Weld Connecting Drip plate to Floor Beam (FB27A) at Panel Point PP70 (Cross Beam Side) (SPCM): One (1) Transverse linear indication measuring approximately 17 mm. Members are identified as Drip plate (329M) Non SPCM to Floor Beam FB27A (X12D) Seismic Performance Critical Material (SPCM). This weld does not appear to be identified by number on the contractors weld maps.
- All indications are clearly marked on the material near the weld. For details, see Magnetic particle Testing (MT) report generated by this QA for this date.
- OBG segment 8CW is located outside west of the Blast Shop area.
- The Notice of Witness Inspection Number (NWIT) is 005037. The indications are located inside an area that has been previously tested by ZPMC Quality Control (QC) personnel.

02.02.15.04  
05.03.06-000594,NCT

Received  
NCT-000594 14 Jan 10 Page 1 of 2

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## NCT

( Continued Page 2 of 2 )

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### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Missed Mt indications are a chronic problem. Provide training and equipment as required to ensure that these indications are found by the ZPMC MT technician that missed them. Provide documentation of such training to the engineer. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe      Sr. Transportation Engineer

**Attachments:** ZPMC-0604

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

**File:** 05.03.06

**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: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000631**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0604**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: Segment 8CW LD and FBProcedural  Procedural  Description: Missed MT indication by QC**Reference Description:** Missed Longitudinal and Transverse MT Linear Indications by QC in Segment 8CW LD and FB**Description of Non-Conformance:**

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

-Weld #SSD10-PP68-101 (SPCM): Two (2) Transverse linear indications measuring approximately 15mm and 4mm. Members are identified as FB11C (X46B) Non SPCM to SP158A (PL548A) SPCM.

-Weld #SEG047F-002 (SPCM): One (1) Longitudinal linear indication measuring approximately 15 mm. Members are identified as FB19B (X49F) SPCM to LD4 (X75G) Non SPCM.

-Weld #SEG047F-014 (non SPCM): One (1) Transverse linear indication measuring approximately 15 mm. Members are identified as LD4 (X75G) Non SPCM to FB19B (X7M) Non SPCM.

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-Weld Connecting Drip plate to Floor Beam (FB27A) at Panel Point PP70 (Cross Beam Side) (SPCM): One (1) Transverse linear indication measuring approximately 17 mm. Members are identified as Drip plate (329M) Non SPCM to Floor Beam FB27A (X12D) Seismic Performance Critical Material (SPCM). This weld does not appear to be identified by number on the contractors weld maps.

-All indications are clearly marked on the material near the weld. For details, see Magnetic particle Testing (MT) report generated by this QA for this date.

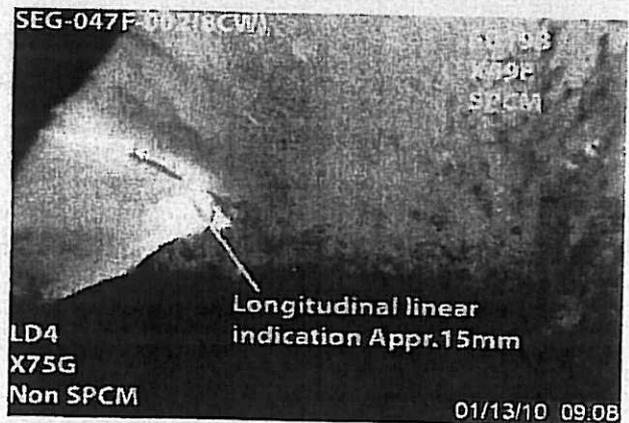
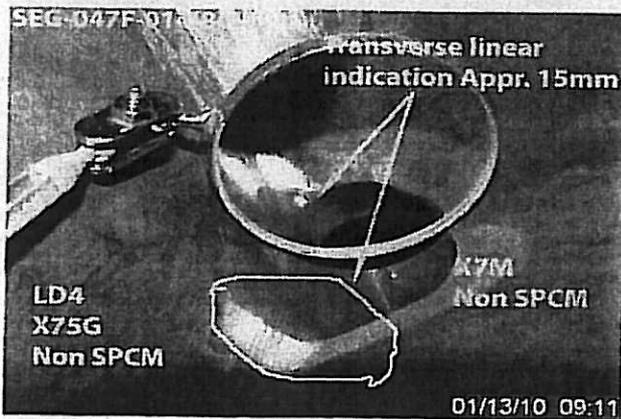
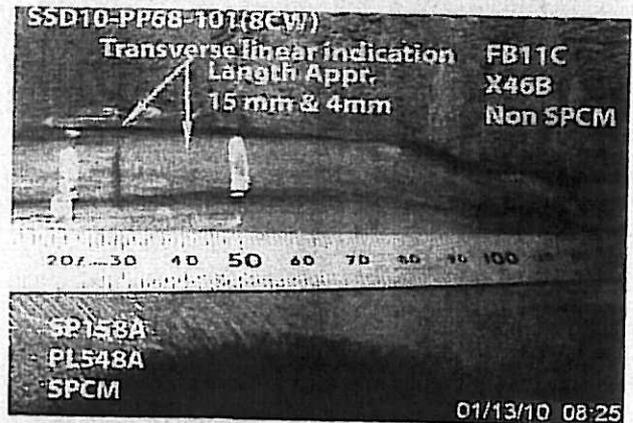
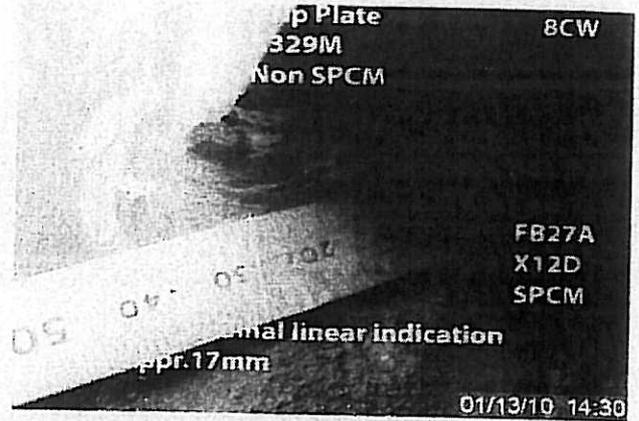
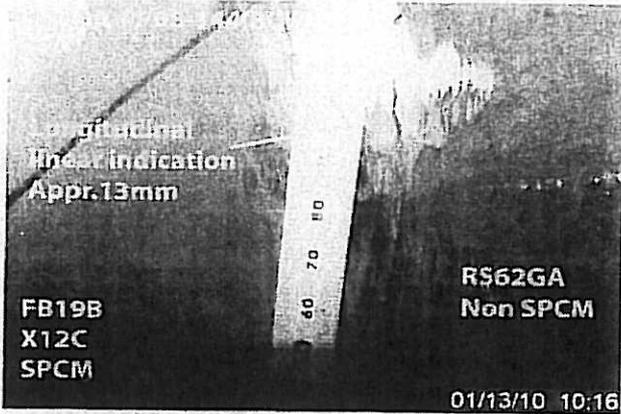
-OBG segment 8CW is located outside west of the Blast Shop area.

-The Notice of Witness Inspection Number (NWIT) is 005037. The indications are located inside an area that

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)

has been previously tested by ZPMC Quality Control (QC) personnel.



### 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

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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cracks.

**Who discovered the problem:** Sabhasis Bera

**Name of individual from Contractor notified:** Wang Chao

**Time and method of notification:** 1630 hours, 01-13-10, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 0845 hours, 01-14-10, 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**

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-000724**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0604**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:** 13-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Magnetic Particle Testing (MT) review of welds located on Segment 8CW, this QA Inspector discovered the following linear indications:

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