

**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-000540

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

**Date:** 17-Dec-2009

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

**NCR #:** ZPMC-0513

### Type of problem:

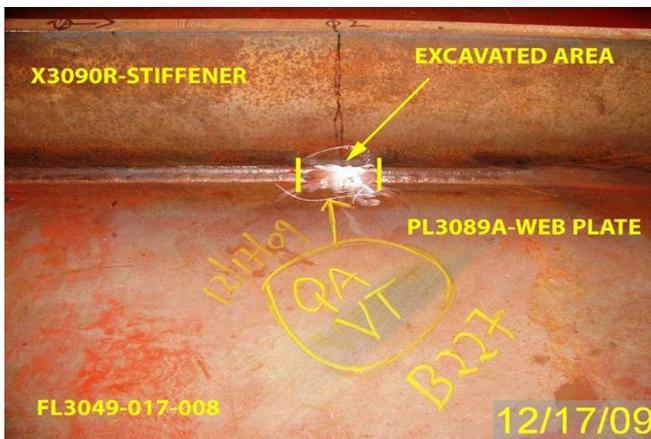
|                     |                   |                     |                                  |
|---------------------|-------------------|---------------------|----------------------------------|
| <b>Welding</b>      | <b>Concrete</b>   | <b>Other</b>        |                                  |
| <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> Crossbeam CB17 |
| <b>Procedural</b>   | <b>Procedural</b> | <b>Description:</b> |                                  |

**Reference Description:** Fillet Weld Excavation with Final QC Acceptance, Crossbeam CB17

### Description of Non-Conformance:

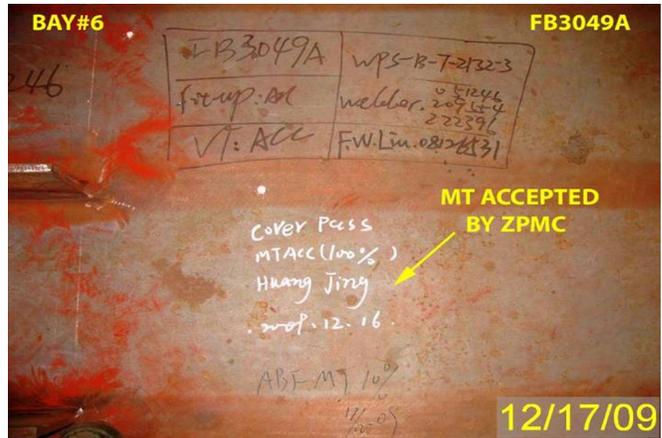
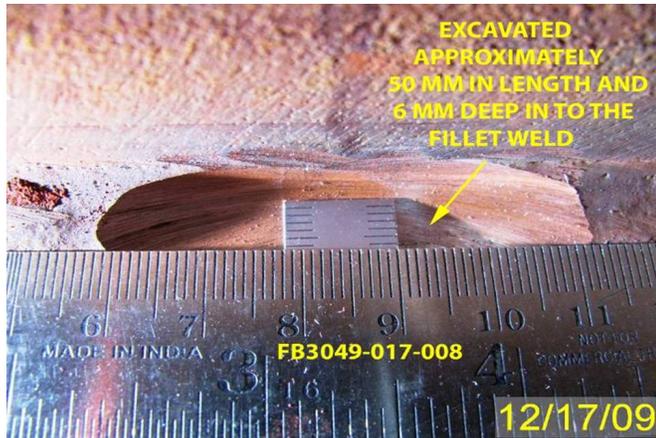
During a random in-process visual verification prior to performing Magnetic Particle Testing (MT) on a Floor Beam (FB) for Crossbeam CB17 located at Bay # 6, the Caltrans Quality Assurance (QA) Inspector observed a fillet weld that had been excavated approximately 50 mm in length and 6 mm in depth. The contractor (ZPMC) offered a formal NDT Inspection Notification Sheet, acknowledging the weld was complete and that ZPMC MT technicians had tested and accepted 100% MT on this FB. Additional information identifying the non-conformance is listed below.

- The Floor Beam is identified as FB3049-017-008.
- The fillet weld connects the FB Web Plate (PL3089A) to FB Stiffener (X3090R).
- The fillet weld size is 6 mm in size per the approved contract drawings.
- The NDT Inspection Notification Sheet request number was identified as: 004835



# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )



## Applicable reference:

AWS D1.5 (02) Section 6.6.3; "The Contractor shall comply with all requests of the QA Inspector to correct deficiencies in materials and workmanship, as specified in the contract documents."

AWS D1.5 (02) Section 6.6.6; "The Contractor shall schedule NDT to facilitate attendance by the QA Inspector. The QA Inspector shall be advised by the Contractor of operational and NDT schedules and scheduled changes."

AWS D1.5 (02) Section 6.7.3; "After repairs of discontinuities have been made, additional NDT inspection shall be performed to ensure that the repairs are satisfactory. This testing shall include the repaired area plus at least 50 mm [2 in.] on each side of the repaired area."

**Who discovered the problem:** Naddi Sandeep Kumar

**Name of individual from Contractor notified:** Chang Bao Qian

**Time and method of notification:** 1000 hours, 12/17/09, Verbal

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

**Time and method of notification:** 1400 hours, 12/17/09, Verbal

**QC Inspector's Name:** Li Jian

**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Guest,Skylar SMR

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**Reviewed By:** Wahbeh,Mazen SMR



## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000501

**Subject:** NCR No. ZPMC-0513

**Dated:** 11-Jan-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000455 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has generated an internal NCR and has included the repair procedure used and all associated documentation of repair. ZPMC requests closure of this NCR.

ZPMC has acknowledged this Base Metal repair should have required Engineers approval. ZPMC has generated an internal NCR and has included the repair procedure used and all associated documentation of repair. ZPMC requests closure of this NCR.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000455R00;

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### Caltrans' comments:

**Status:** REJ

**Date:** 11-Jan-2010

The response letter does not address the correct NCR and therefore is rejected.

**Submitted by:** Howe, Bill

**Date:** 11-Jan-2010

**Attachment(s):**



No. B-559

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-1-7**

**REGARDING: NCR-000392(ZPMC-0366)**

With this letter of response, ZPMC requests closure of CT NCR-000393(ZPMC-0366), what mentioned that QA observed improper buttering on base metal in 6AE.

ZPMC built up the surface thickness on several base metal areas around the Side Plates Splice weld in order to rectify the faying surface of the traveler rail bolt attachments. ZPMC acknowledged this was an unapproved procedure and has issued internal NCR. For warrant the buttering areas' quality, MT & UT were performed.

So ZPMC provides internal NCR, WWR & NDT documentations, hoping CT could take a review and consider close this NCR.

**ATTACHMENT:**

NCR-000392(ZPMC-0366)

NCR-B-251(ZPMC-0366)

B-WR6970

VT FOR B-WR6970

B787-UT-10608

B787-MT-17561

*Handwritten signature*  
1/7/10



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: 01-Sep-2009

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

Dear: Mr. Charles Karapicki  
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
 Subject: NCR No. ZPMC-0366

Job Name: SAS Superstructure  
 Document No: 05.03.06-000356

Reference Description: Unacceptable Base metal repair on OBG side panel

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: 06

**Remarks:**

This Quality Assurance (QA) Inspector observed the in-process welding of a base metal repair being performed on side plate SP307 and SP426A adjacent to side plate splice weld No.SEG028B-032 on OBG Segment 6AE. Approximately four areas of 75mm x 75mm of filler material were deposited into four locations, in and around the splice weld to rectify the fit up of the traveler rail bolt attachments by building up the surface thickness to compensate the gap at the faying surface. These additional welds are not in the approved shop drawings or weld map. This is an unacceptable base metal repair and was performed without the approval of the Engineer.

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

Submit repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0366

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, Contract Files, Ching Chao  
 File: 05.03.06

DEPARTMENT OF TRANSPORTATION  
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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-000392

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 17-Aug-2009

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

NCR #: ZPMC-0366

Type of problem:

- Welding  Concrete  Other   
 Welding  Curing  Procedural   
 Joint fit-up  Coating  Other   
 Procedural  Procedural  Description:

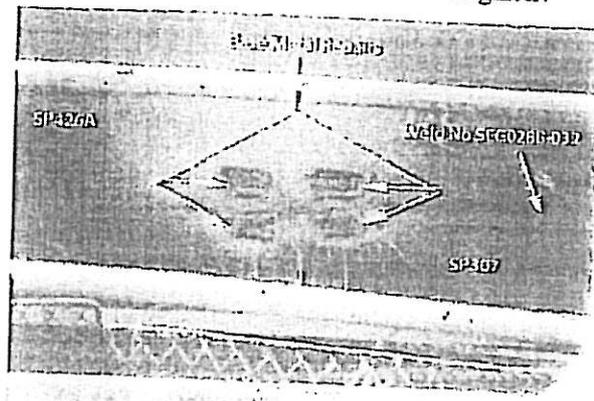
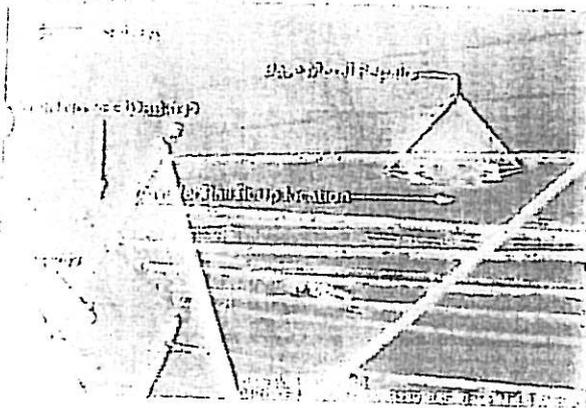
Bridge No: 34-0006

Component: OBG Segment 6AE Side Panel Repair

Reference Description: Unacceptal Base metal repair on OBG side panel

Description of Non-Conformance:

This Quality Assurance (QA) Inspector observed the in-process welding of a base metal repair being performed on side plate SP307 and SP426A adjacent to side plate splice weld No.SEG028B-032 on OBG Segment 6AE. Approximately four areas of 75mm x 75mm of filler material were deposited into four locations, in and around the splice weld to rectify the fit up of the traveler rail bolt attachments by building up the surface thickness to compensate the gap at the faying surface. These additional welds are not in the approved shop drawings or weld map. This is an unacceptable base metal repair and was performed without the approval of the Engineer.



Applicable reference:

AWS D1.5 2002-Section 3.7.4.- "Prior approval of the engineer shall be obtained for repairs to base metal (other than those required by 3.2), repair of major or delayed cracks, repairs to ESW and EGW welds with internal defects, or for a revised design to compensate for defects."

Who discovered the problem: Rodney Patterson

Name of individual from Contractor notified: Lee Man Kit

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

Time and method of notification: 1030, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1100, Verbal

QC Inspector's Name: Tao Lei

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.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



# Nonconformance Report

## 不符合项报告

|   |   |
|---|---|
| Project Name: S.F.O.B.B<br>项目名称: 美国加州海湾大桥               | NCR Number: NCR-B-251<br>NCR 编号: (ZPMC-0366)                    |
| Item: Unacceptable Base Metal Repair<br>名称描述: 未经批准的母材返修 | Item Number: N/A<br>Drawing: SP307, SP426A<br>图号: SP307, SP426A |
| Location: Outside Yard<br>位置: OBG 外场                    | Date: 2009-09-10<br>日期: 2009-09-10                              |

**Description of Nonconformance:**  
不符合项状态描述:

CT Inspector observed the in-process welding of a base metal repair being performed on side plate SP307 and SP426A adjacent to side plate splice weld No. SEG028B-032 on OBG Segment 6AE. Approximately four areas of 75mm x 75mm of filler material were deposited into four locations, in and around the splice weld to rectify the fit up of the traveler rail bolt attachments by building up the surface thickness to compensate the gap at the faying surface. These additional welds are not in the approved shop drawing or weld map. This is an unacceptable base metal repair and was performed without the approval of Engineer.

加州检验员发现在 6AE 斜底板 SP307 和 SP426A 靠近焊缝 SEG028B-032 位置在木材表面的堆焊。有 4 处大约 75mm x 75mm 大小的返修区域，其目的是增加行车轨道支架位置的母材厚度，已保证贴合位置的充分接触。这些附加焊缝并没有相关图纸或者焊缝编号。并且该工艺没有得到工程师的批准。

(参考标准 AWD D1.5 章节 3.7.4)

|  |   |  |
|--|---|--|
| Work By: <u>Zi Zhigang</u><br>施工方: <u>Zi Zhigang</u> | Prepared by: <u>[Signature]</u><br>准备: <u>9/10/09</u> | Reviewed by QCE: <u>[Signature]</u><br>质量工程师批准: <u>[Signature]</u> |
| <input type="checkbox"/> Drawing Error<br>图纸错误       | <input type="checkbox"/> Material Defect<br>材料缺陷      | <input checked="" type="checkbox"/> Fabrication Error<br>制作错误      |
| <input type="checkbox"/> Other<br>其他原因               |   |  |

|   |                                       |                                       |
|---|---------------------------------------|---------------------------------------|
| Disposition: <input type="checkbox"/> Use as is<br>处理措施: 回用 | <input type="checkbox"/> Repair<br>返修 | <input type="checkbox"/> Reject<br>拒收 |
|---|---------------------------------------|---------------------------------------|

Recommendation:  
建议:

|                          |                                  |
|--------------------------|----------------------------------|
| Prepared by: _____<br>准备 | Approved by QCA: _____<br>质量经理批准 |
|--------------------------|----------------------------------|

Reason for Nonconformance:  
不符合原因: 没有得到工程师的批准进行母材表面的堆焊。  
Build up surface of base metal before approved by engineer.

预防措施: 没有得到工程师的批准进行堆焊。  
Approved by engineer and then repair  
Approved by/批准: [Signature]

|   |   |
|---|---|
| Technical Justification for Use-As-Is/Repair: <input type="checkbox"/> Attachment<br>回用或返修的技术依据: <u>回用, 根据返修报告进行处理。</u> | <input type="checkbox"/> Non-attachment<br>附件                       |
| Reviewed /批准: <u>Manli 2009.9.15</u>  | Per firm use as is. Deal with the problem per Repair Report.<br>无附件 |

|   |  |
|---|--|
| Verification: <input checked="" type="checkbox"/> Acceptable<br>确认: 可接受 | <input type="checkbox"/> Unacceptable<br>不可接受 <u>对堆焊区域进行 MT/UT 检测。</u> |
| Verified by QCI/质检确认: <u>Zhu zhonghai</u>                               | Reviewed by QCA/质检主任审核: _____  |

#R787-QCP-1300

2009.11.05



# 焊缝返修报告

版本 Rev. No.

## Welding Repair Report

0

|                      |                 |                    |                         |                              |          |
|----------------------|-----------------|--------------------|-------------------------|------------------------------|----------|
| 项目名称<br>Project Name | 美国海湾大桥<br>SFOBB | 部件图号<br>Drawing No | SEG028/SEG036<br>SEG038 | 报告编号<br>Report No.           | B-WR6970 |
| 合同号<br>Contract No.: | 04-0120F4       | 部件名称<br>Items Name | 6AE/7BE/7CE             | NDT报告编号<br>Report No. of NDT | NA       |
| 项目编号<br>Project No.: | ZP06-787        |                    |                         |                              |          |

焊缝缺陷描述:

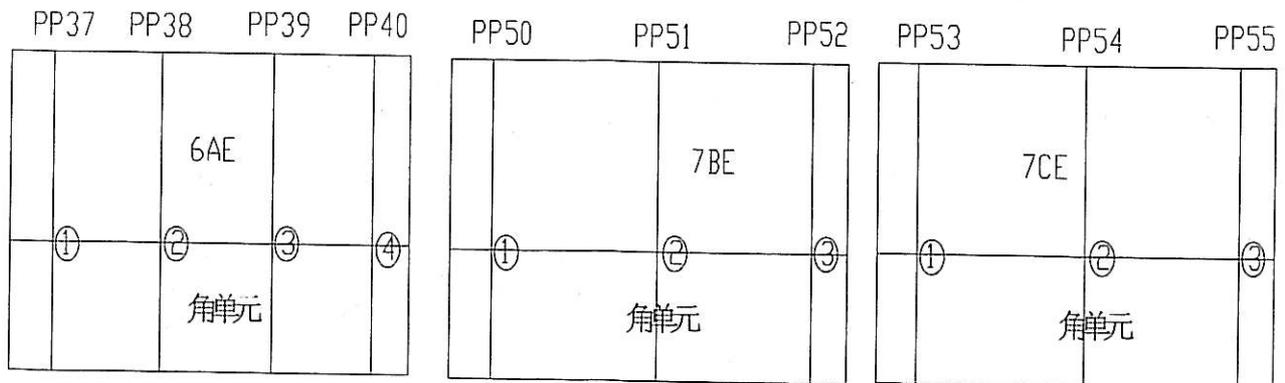
**Description of welding discontinuity:**

根据检查报告1075#的工艺处理结果,对梁段6AE/7BE/7CE的相关位置进行堆焊处理,并保证工艺要求的平整度。具体见下图!

According to inspection report 1075# disposition, it shall build up 6AE/7BE/7CE relevant position to ensure flatness, see the following draft.

检验员 (Inspector): Li Yanhua 日期(Date): 09.08.13

焊缝返修位置示意图:

**Draft of welding discontinuity:**

产生原因:

Caused:

焊接变形和制作误差。

Weld distortion and fabricate error.

车间负责人(Foreman): *Li Zhigang* 日期(Date): *09.08.13*

处理意见

Disposition:

1. 按照焊接返修工艺规程 (WPS) 打磨缺陷区域;
2. 对该区域作100%MT检查, 确保缺陷全部去除;
3. 根据批准的焊接返修工艺规程 (WPS) 进行预热及焊接;
4. 将焊接区域打磨至与母材平齐;
5. 对修补区域进行VT与MT检测;

1. Remove all the defects according to the approved repair WPS by means of grinding.
2. Verify with MT and VT no defects remain in the repair area prior to weld;
3. Preheat and weld according to the relevant WPS.
4. Grind the weld flush with base metal after welding.
5. Perform VT and MT inspection of the repaired area.

工 艺:  
Technical engineer *X. Y. D. y. haw*

审核:  
Approved by

日期  
Date *09.08.13*



# 焊缝返修报告

## Welding Repair Report

版本 Rev. No.

0

|                      |                 |                    |                         |                             |          |
|----------------------|-----------------|--------------------|-------------------------|-----------------------------|----------|
| 项目名称<br>Project Name | 美国海湾大桥<br>SFOBB | 部件图号<br>Drawing No | SEG028/SEG036<br>SEG038 | 报告编号<br>Report No.          | B-WR6970 |
| 合同号<br>Contract No.: | 04-0120F4       | 部件名称<br>Items Name | 6AE/7BE/7CE             | NDT报告编号<br>Report No.of NDT | NA       |
| 项目编号<br>Project No.: | ZP06-787        |                    |                         |                             |          |

纠正措施:

**Correction action to prevent re occurrence:**

1. 加强焊接和制作过程中的监控，减少误差。
1. Enhance supervision in process of welding and fabrication to reduce error.

车间负责人(Foreman): *Li Zhigang*      日期(Date): *09.08.13*

|   |  |  |                                      |
|---|--|--|--------------------------------------|
| 参照的WPS编号<br>Repair WPS No.                        | WPS-345-SMAW-4<br>G(4F)-Repair<br>WPS-345-SMAW-4<br>G(4F)-FCM-Repair | 工艺员<br>technologist                          | <i>Xu Donghai</i><br><i>09.08.13</i> |
| 返修(碳刨)前预热温度<br>Preheat temperature before gouging | <i>NA</i>  | 返修的缺陷<br>Description of discontinuity        | <i>NA</i>                            |
| 焊前处理检查<br>Inspection before welding               | <i>ALL</i>   | 焊前预热温度<br>Preheat temperature before welding | <i>103</i>                           |
| 最大碳刨深度<br>Max. depth of gouging                   | <i>2mm</i>   | 碳刨总长<br>Total length of gouging              | <i>300</i>                           |
| 焊工<br>welder                                      | <i>067610</i>  | 焊接类型<br>welding type                         | <i>SMAW</i>                          |
| 焊接电流<br>Current                                   | <i>203</i>   | 焊接电压<br>Voltage                              | <i>24.8</i>                          |
|   |  | 焊接位置<br>position                             | <i>4G</i>                            |
|   |  | 焊接速度<br>Speed                                | <i>166</i>                           |

**返修后检查**  
Inspection After repairing:

|                     |            |                                       |                              |
|---------------------|------------|---------------------------------------|------------------------------|
| 外观检查<br>VT result   | <i>ALL</i> | 检验员<br>Inspector <i>Zhangzhonghai</i> | 日期<br>Date <i>2009.11.04</i> |
| NDT复检<br>NDT result | <i>ALL</i> | 探伤员<br>NDT person <i>Li Zhigang</i>   | 日期<br>Date <i>2009.11.05</i> |

见证:  
Witness/Review:

备注:  
Remark:







## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000501

**Subject:** NCR No. ZPMC-0513

**Dated:** 14-Apr-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000455 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** The ZPMC NDT Inspection Notification Sheet that the inspector referenced is for the Tower not OBG. The statement that ZPMC formally acknowledged that the weld was complete is not accurate

The ZPMC NDT Inspection Notification Sheet that the inspector referenced is for the Tower not OBG. The statement that ZPMC formally acknowledged that the weld was complete is not accurate based on the documents referenced. In fact this sub assembly was inspected and turned over the Department for inspection and was summarily accepted on 12/30/2009. Based on this, ZPMC requests that this NCR be closed since the basis of this NCR was not accurate.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000455R01;

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### Caltrans' comments:

**Status:** REJ

**Date:** 20-Apr-2010

This proposed resolution is not acceptable. It is still unclear to the Department that how writing on FB3049A showing Mr. Huang Jing tested the weld by MT and accepted the weld on December 16, 2009, see NCR ZPMC 0513, when the weld was being repaired.

**Submitted by:** Ku, Stanley

**Attachment(s):**

**Date:** 20-Apr-2010



No. B-583

# LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-1-15

REGARDING: NCR-000540(ZPMC-0513)

With this letter of response, ZPMC requests closure of CT NCR-000540(ZPMC-0513), what mentioned that CT inspector observed excavation after final inspection by QC.

- The description in this NCR is incorrect. The NDT inspection notification sheet is for tower not OBG. A misunderstanding that this panel has been final accepted by ZPMC occurred by this CT inspector. Please see attached NDT inspection notification sheet #004835.
- This panel has been green tag by three parties. See attached green tag #10595. So base on the responses above and attached documentations, ZPMC requests closure of this NCR..

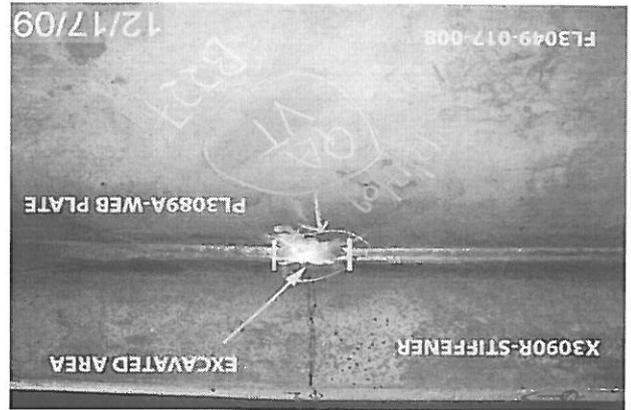
## ATTACHMENT:

NCR-000540(ZPMC-0513)

NDT INSPECTION NOTIFICATION SHEET #004835

QA APPROVAL REQUEST FORM FOR FB3049A

*1/15/10*  
*[Signature]*



- The Floor Beam is identified as FB3049-017-008.
- The fillet weld connects the FB Web Plate (PL3089A) to FB Stiffener (X3090R).
- The fillet weld size is 6 mm in size per the approved contract drawings.
- The NDT Inspection Notification Sheet request number was identified as: 004835

During a random in-process visual verification prior to performing Magnetic Particle Testing (MT) on a Floor Beam (FB) for Crossbeam CB17 located at Bay # 6, the Caltrans Quality Assurance (QA) Inspector observed a fillet weld that had been excavated approximately 50 mm in length and 6 mm in depth. The contractor (ZPMC) offered a formal NDT Inspection Notification Sheet, acknowledging the weld was complete and that ZPMC MT technicians had tested and accepted 100% MT on this FB. Additional information identifying the non-conformance is listed below.

**Description of Non-Conformance:**

**Reference Description:** Fillet Weld Excavation with Final QC Acceptance, Crossbeam CB17

|              |                                     |            |                          |              |                          |
|--------------|-------------------------------------|------------|--------------------------|--------------|--------------------------|
| Welding      | <input checked="" type="checkbox"/> | Concrete   | <input type="checkbox"/> | Other        | <input type="checkbox"/> |
| Welding      | <input type="checkbox"/>            | Curing     | <input type="checkbox"/> | Procedural   | <input type="checkbox"/> |
| Joint fit-up | <input type="checkbox"/>            | Coating    | <input type="checkbox"/> | Other        | <input type="checkbox"/> |
| Procedural   | <input checked="" type="checkbox"/> | Procedural | <input type="checkbox"/> | Description: | <input type="checkbox"/> |

Bridge No: 34-0006

Component: Crossbeam CB17

**Type of problem:**

**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**

**Location:** Changxing Island, Shanghai, P.R. China  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island  
**Report No:** NCR-000540  
**Date:** 17-Dec-2009  
**NCR #:** ZPMC-0513

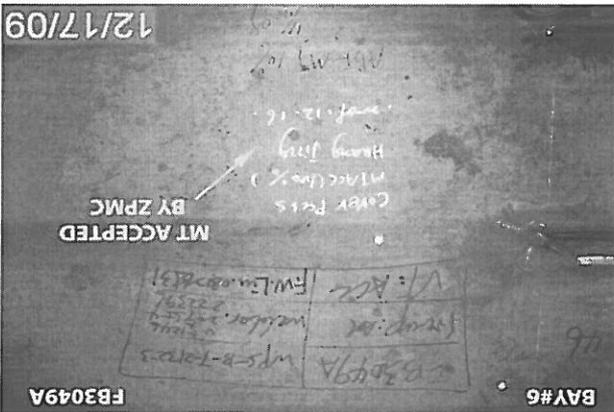
**DEPARTMENT OF TRANSPORTATION**  
 DIVISION OF ENGINEERING SERVICES  
 Office of Structural Materials  
 Quality Assurance and Source Inspection  
 Bay Area Branch  
 690 Walnut Ave. St. 150  
 Vallejo, CA 94592-1133  
 (707) 649-5453  
 (707) 649-5493

Contract #: 04-0120F4  
 City: SF/ALARA: 80 PM: 13.2/13.9  
 File #: 69.25B



**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**

(Continued Page 2 of 2)



**Applicable reference:**

AWS D1.5 (02) Section 6.6.3; "The Contractor shall comply with all requests of the QA Inspector to correct deficiencies in materials and workmanship, as specified in the contract documents."

AWS D1.5 (02) Section 6.6.6; "The Contractor shall schedule NDT to facilitate attendance by the QA Inspector. The QA Inspector shall be advised by the Contractor of operational and NDT schedules and scheduled changes."

AWS D1.5 (02) Section 6.7.3; "After repairs of discontinuities have been made, additional NDT inspection shall be performed to ensure that the repairs are satisfactory. This testing shall include the repaired area plus at least 50 mm [2 in.] on each side of the repaired area."

**Who discovered the problem:** Naddi Sandeep Kumar

**Name of individual from Contractor notified:** Chang Bao Qian

**Time and method of notification:** 1000 hours, 12/17/09, Verbal

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

**Time and method of notification:** 1400 hours, 12/17/09, Verbal

**QC Inspector's Name:** Li Jian

**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Guest,Skylar

SMR

**Reviewed By:** Wabbeh,Mazen

SMR



NDT客户检验通知单  
NDT Inspection Notification Sheet

Submit time:  
2009-12-10 13:52

文件编号: 004835  
Document No.

| 序号<br>No | 检验内容<br>Inspection             | 待检验构件<br>Inspection part | 产品分类<br>Section      | 检验场地<br>Inspection Place | 计划检验时间<br>Inspection Time         | CT 计划赴检时间<br>CT Estimated<br>Inspection Time |
|----------|--------------------------------|--------------------------|----------------------|--------------------------|-----------------------------------|--|
| 1        | FINAL<br>VT/MT/UT FOR<br>WELDS | WD1-A305-53M-4           | TOWER SHRUT<br>PLATE | BAY 6                    | 2009-12-10 14:30<br>FOR GREEN TAG | 14:30  |

1、见证通知发出后，现场等待时间通常不超过35分钟；如有变动，现场通知。  
1、When ZPMC give this table to AB/F, ZPMC will do the inspection in 35 minutes. If we change the plan, we will inform AB/F in the shop.

ZPMC 联系人:  
Requested By:

*Zhang Mei*

2、ZPMC根据自己的检验控制点 (HOLD POINT) 进行日常检验。

2、ZPMC will do any inspection according to the HOLD POINT.

3、此单为临时试用单，仅适用于完工焊缝的NDT检验见证通知。

3、This table is a temporary one, just for final NDT inspection notification.

AB/F 签收人:  
AB/F Receiver:

*Jianna Zhang 13:54*

4、QC检验完成后，QA是否需要复验，由QA自行决定，QC不再另行通知。复验等待时间通常为24小时。

签收时间:  
Time:

*12-10-2009*

5、AB/F to notify ZPMC in the same shift that CT will attend and at what time.

CT 签收人:

CT Receiver:

*Steve Neal*

6、加州现场检验完成后会告知AB/F检验结果，AB/F会在24小时内告知ZPMC加州复检结果。  
6、CT to notify AB/F that the work has been completed and the result. AB/ to notify ZPMC that the work has been

签收时间:

*13:54 12/10/09*

QA APPROVAL REQUEST FORM

Component FB304PA Date 2007.12.16

In-Process tag No. 10568  
\* Attach In-Process tag

Green tag No. 10595 Location CB17

Weld numbers FB304P-017-001-012, 013-022

ZPMC Team Representative Huang Min Date 2007.12.16

ABF Team Representative Cheng Bao guan Date 2007.12.30

CT Team Representative [Signature] Date 12/30/07

DOCUMENTATION REVIEW

NDE complete  
Repairs complete  
NCR's closed

|     |                          |                          |                          |
|-----|--------------------------|--------------------------|--------------------------|
| Yes | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| No  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ABF QA Manager \_\_\_\_\_

Date \_\_\_\_\_

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000501

**Subject:** NCR No. ZPMC-0513

**Dated:** 21-May-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000455 Rev: 02

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has repaired the indication and has performed the NDT after to show the weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the indication and has performed the NDT after to show the weld is acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000455R02;

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### Caltrans' comments:

**Status:** CLO

**Date:** 25-May-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0513 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 25-May-2010



No. B-768

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-5-21**

**REGARDING: NCR-000540(ZPMC-0513)**

The missed repaired area has been finished and the sequent NDT has been done and was found to be acceptable. Based on this, ZPMC is request closure of this NCR.

**ATTACHMENT:**

NCR-000540(ZPMC-0513)

B-787-MT-23286

A handwritten signature in black ink, appearing to be "L. J. [unclear]".

5/21/10



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:** 24-Dec-2009

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

**Dear:** Mr. Charles Kanapicki  
**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager  
**Job Name:** SAS Superstructure

**Subject:** NCR No. ZPMC-0513  
**Document No:** 05.03.06-000501

**Reference Description:** Fillet Weld Excavation with Final QC Acceptance, Crossbeam CB17

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:** Xbeam **Lift:** N/A

### Remarks:

During a random in-process visual verification prior to performing Magnetic Particle Testing (MT) on a Floor Beam (FB) for Crossbeam CB17 located at Bay # 6, the Caltrans Quality Assurance (QA) Inspector observed a fillet weld that had been excavated approximately 50 mm in length and 6 mm in depth. The contractor (ZPMC) offered a formal NDT Inspection Notification Sheet, acknowledging the weld was complete and that ZPMC MT technicians had tested and accepted 100% MT on this FB. Additional information identifying the non-conformance is listed below.

- The Floor Beam is identified as FB3049-017-008.
- The fillet weld connects the FB Web Plate (PL3089A) to FB Stiffener (X3090R).
- The fillet weld size is 6 mm in size per the approved contract drawings.
- The NDT Inspection Notification Sheet request number was identified as: 004835

### Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe  
**Attachments:** ZPMC-0513

**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: 13.2/13.9  
 File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

**Location:** Changxing Island, Shanghai, P.R. China

**Report No:** NCR-000540

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

**Date:** 17-Dec-2009

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

**NCR #:** ZPMC-0513

**Type of problem:**

Welding  Concrete  Other

Welding  Curing  Procedural

Joint fit-up  Coating  Other

Procedural  Procedural  Description:

**Bridge No:** 34-0006

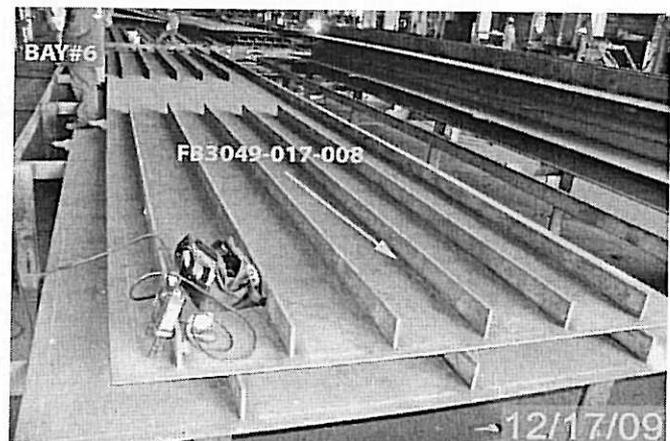
**Component:** Crossbeam CB17

**Reference Description:** Fillet Weld Excavation with Final QC Acceptance, Crossbeam CB17

**Description of Non-Conformance:**

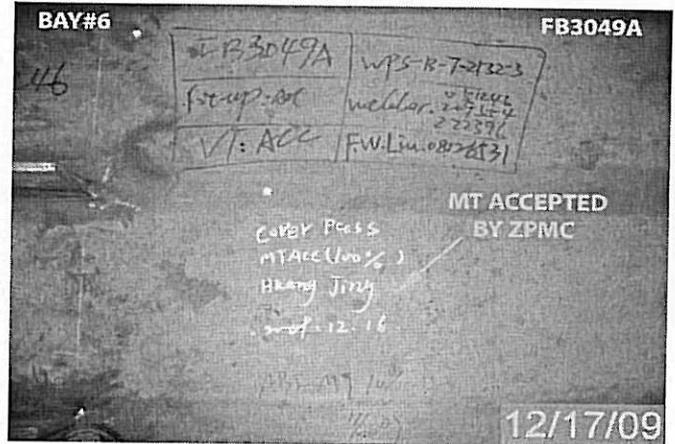
During a random in-process visual verification prior to performing Magnetic Particle Testing (MT) on a Floor Beam (FB) for Crossbeam CB17 located at Bay # 6, the Caltrans Quality Assurance (QA) Inspector observed a fillet weld that had been excavated approximately 50 mm in length and 6 mm in depth. The contractor (ZPMC) offered a formal NDT Inspection Notification Sheet, acknowledging the weld was complete and that ZPMC MT technicians had tested and accepted 100% MT on this FB. Additional information identifying the non-conformance is listed below.

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- The fillet weld size is 6 mm in size per the approved contract drawings.
- The NDT Inspection Notification Sheet request number was identified as: 004835



# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



## Applicable reference:

AWS D1.5 (02) Section 6.6.3; "The Contractor shall comply with all requests of the QA Inspector to correct deficiencies in materials and workmanship, as specified in the contract documents."

AWS D1.5 (02) Section 6.6.6; "The Contractor shall schedule NDT to facilitate attendance by the QA Inspector. The QA Inspector shall be advised by the Contractor of operational and NDT schedules and scheduled changes."

AWS D1.5 (02) Section 6.7.3; "After repairs of discontinuities have been made, additional NDT inspection shall be performed to ensure that the repairs are satisfactory. This testing shall include the repaired area plus at least 50 mm [2 in.] on each side of the repaired area."

**Who discovered the problem:** Naddi Sandeep Kumar  
**Name of individual from Contractor notified:** Chang Bao Qian  
**Time and method of notification:** 1000 hours, 12/17/09, Verbal  
**Name of Caltrans Engineer notified:** Bill Howe  
**Time and method of notification:** 1400 hours, 12/17/09, Verbal  
**QC Inspector's Name:** Li Jian  
**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

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|                                    |     |
|------------------------------------|-----|
| <b>Inspected By:</b> Guest, Skyler | SMR |
| <b>Reviewed By:</b> 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-23286      DATE日期 2009.12.25      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: FB3049A      CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4  
STRUT

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>, 2009

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

MAGNETIZING METHOD 磁化方法: Continuous magnetic yoke 磁轭式连续法      CURRENT 电流: AC

PARTICLE TYPE 磁粉类型: Dry magnet powder 干磁粉      YOKE SPACING 磁轭间距: 70~150mm

MATERIAL TO BE EXAMINED 检测材料:  WELDING 焊接件      Material & thickness 母材,厚度: A709M-345T2-X  
 CASTING 铸件      12/14mm  
 FORGING 锻造

WELDING PROCESS 焊接方法: FCAW      TYPE OF JOINT 焊缝类型: CORNER JOINT

| WELD I.D.<br>焊缝编号 | DISCONTINUITY不连续性 |            |                    | ACCEPT<br>接受 | REJECT<br>拒收 | REMARKS<br>备注 |
|-------------------|-------------------|------------|--------------------|--------------|--------------|---------------|
|                   | INDICATION<br>指示  | TYPE<br>类型 | LENGTH IN mm<br>长度 |              |              |               |
| FB3049-017-001    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-002    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-003    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-004    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-005    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-006    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-007    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-008    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-009    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-010    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-011    |                   |            |                    | ACC.         |              | 100%MT        |
| FB3049-017-012    |                   |            |                    | ACC.         |              | 100%MT        |

AFTET HSR1(B)7551

BLANK

|  |   |
|--|---|
| EXAMINED BY主探<br><i>Huangjing</i> 09.12.25 | REVIEWED BY审核<br><i>Sunwei</i> 09.12.26 |
| LEVEL-II SIGN 签名 / DATE日期                  | LEVEL-II SIGN / DATE日期                  |
| 质量经理 / QCM                                 | 用户CUSTOMER                              |
| 签字 SIGN / 日期 DATE                          | 签字 SIGN / 日期 DATE                       |

**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-000645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-May-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0513**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:** 17-Dec-2009**Description of Non-Conformance:**

During a random in-process visual verification prior to performing Magnetic Particle Testing (MT) on a Floor Beam (FB) for Crossbeam CB17 located at Bay # 6, the Caltrans Quality Assurance (QA) Inspector observed a fillet weld that had been excavated approximately 50 mm in length and 6 mm in depth. The contractor (ZPMC) offered a formal NDT Inspection Notification Sheet, acknowledging the weld was complete and that ZPMC MT technicians had tested and accepted 100% MT on this FB. Additional information identifying the non-conformance is listed below.

- The Floor Beam is identified as FB3049-017-008.
- The fillet weld connects the FB Web Plate (PL3089A) to FB Stiffener (X3090R).
- The fillet weld size is 6 mm in size per the approved contract drawings.
- The NDT Inspection Notification Sheet request number was identified as: 004835

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

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

**Corrective action taken:**

Contractor submitted NDT records verifying weld has been repaired and is in conformance with Contract weld quality requirements. An internal NCR was also 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, who represents the Office of Structural Materials for your project.

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# QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**Inspected By:** Simonis,Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer