

**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, China

**Report No:** NCR-000991

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

**Date:** 17-Mar-2011

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

**NCR #:** ZPMC-0949

### Type of problem:

**Welding**

**Concrete**

**Other**

**Welding**

**Curing**

**Procedural**

**Bridge No:** 34-0006

**Joint fit-up**

**Coating**

**Other**

**Component:** East Anchorage Bearing Blocks - APBB1

**Procedural**

**Procedural**

**Description:**

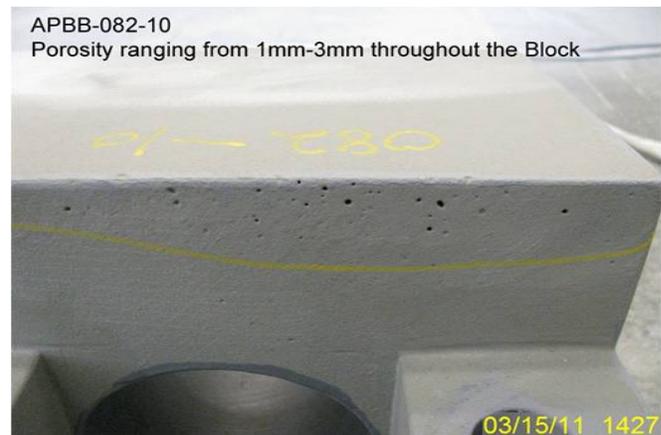
**Reference Description:** Missed VT Indications Discovered by QA on Lift 14 East Anchorage Bearing Blocks

### Description of Non-Conformance:

During the Quality Assurance Visual Testing (VT) verification of the APBBs after blasting, this Quality Assurance Inspector (QA) discovered the following issue:

- The machined surfaces of seven of the APBBs, did not appear to comply with the contract documents.
- The surfaces exhibited excessive porosity.
- The discontinuities range from 1mm to 15mm in diameter.
- The material type is cast steel in accordance with ASTM A148 GR 550-345.
- The parts are identified as APBB1-082-10, 083-2, 057-1, 082-2, 082-1, 121-11 and 121-3.
- The APBBs have been visually tested and accepted by ZPMC QC. According to the contract documents, all castings shall be visually tested 100% on all surfaces.

See attached photos for details



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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Applicable reference:**

Special Provisions Section 10-1.59 [Castings]

Examination-Visual

Each casting shall be visually examined 100% on all surfaces and shall be free of adhering sand, scale, cracks, shrinkage, unfused chills and hot tears and meet ASTM Designation: A802, Level III. Linear indications, defined as having a ratio of maximum to minimum dimensions greater than 3, tears and cracks will not be permitted. Indications less than 3mm for Level 1 zones and 6 mm elsewhere may be disregarded.

Machined surfaces shall be free of voids or other discontinuities that exceed the following:

- A. A maximum of one discontinuity within a radius of 150 mm that has a diameter not exceeding 3 mm within the saddle troughs or 5 mm elsewhere.
- B. A maximum depth of one half of the maximum diameter.
- C. A generally rounded shape with no sharp corners.

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.”

**Who discovered the problem:** Manuel Teall

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

**Time and method of notification:** 15:00\_3/17/11\_Email

**Name of Caltrans Engineer notified:** Sean Eagen

**Time and method of notification:** 18:00\_3/17/11\_Email

**QC Inspector's Name:** Wang Lu

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

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

NA

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Devey,Jim	SMR
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<b>Reviewed By:</b>	Wahbeh,Mazen	SMR
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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

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

**Date:** 21-Mar-2011

**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:** 05.03.06-000948

**Subject:** NCR No. ZPMC-0949

**Reference Description:** Missed VT Indications Discovered by QA on Lift 14 East Anchorage Bearing Blocks

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:** Casting **Lift:** 14

### Remarks:

During the Quality Assurance Visual Testing (VT) verification of the APBBs after blasting, this Quality Assurance Inspector (QA) discovered the following issue:

- The machined surfaces of seven of the APBBs, did not appear to comply with the contract documents.
- The surfaces exhibited excessive porosity.
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- The parts are identified as APBB1-082-10, 083-2, 057-1, 082-2, 082-1, 121-11 and 121-3.
- The APBBs have been visually tested and accepted by ZPMC QC. According to the contract documents, all castings shall be visually tested 100% on all surfaces.

See attached NCR No. ZPMC-0949 for details.

### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.,A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Ching Chao

**Attachments:** ZPMC-0949

**cc:** Peter Siegenthaler, Stanley Ku, Contract Files, Bill Casey

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000948

**Subject:** NCR No. ZPMC-0949

**Dated:** 25-May-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000958 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:**

Please see ZPMC's response

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000958R00;

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**Caltrans' comments:**

**Status:** CLO

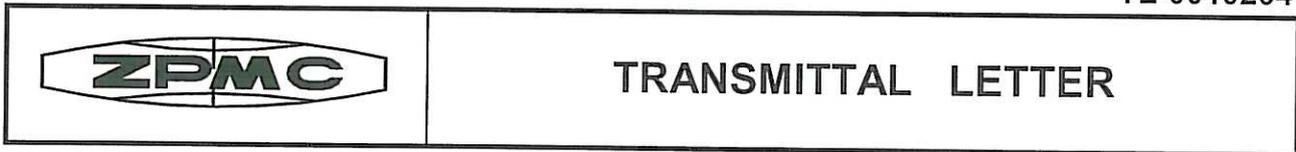
**Date:** 25-May-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0949 is closed.

**Submitted by:** Eagen, Sean

**Date:** 25-May-2011

**Attachment(s):**



PROJECT: S.F.O.B.B.

DATE:2011-05-25

TO: ROSEMARY/ABF JV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: OBG NCR

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

(01) LR: No. B-997

(02) NCR-000991(ZPMC-0949)

B787-MT-38841

B787-MT-41311

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:

*here*

DATE: RECEIVED 25 MAY 2011

*8:16*

COMPANY:



PHONE NO.

PLAN NUMBER:N/A

#R787-QCP-102



No. B-997

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2011-05-24**

**REGARDING: NCR-000991(ZPMC-0949)**

ZPMC acknowledged this problem and has issued an internal NCR. ZPMC QA personnel have talked with the floor CWI to address this issue. These damaged locations have been repaired and been inspected to be acceptable. ZPMC is providing the NDT report to show these areas have been accepted by department's inspector. Based on this, please consider closure of this NCR.

**ATTACHMENT:**

NCR-000991(ZPMC-0949)

B787-MT-38841

B787-MT-41311

*Zhangwei.*  
*5/24/11*

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 21-Mar-2011

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

Dear: Mr. Charles Kanapick  
Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
Subject: NCR No. ZPMC-0949

Job Name: SAS Superstructure  
Document No: 05.03.06-000948

Reference Description: Missed VT Indications Discovered by QA on Lift 14 East Anchorage Bearing Blocks

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- Quality Control (QC) not performed in conformance with contract documents.
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- Non-Conformance Resolved.

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See attached NCR No. ZPMC-0949 for details.

### Action Required and/or Action Taken:

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Transmitted by: Ching Chao

Attachments: ZPMC-0949

cc: Peter Siegenthaler, Stanley Ku, Contract Files, Bill Casey

File: 05.03.06

15.04  
05.03.06.000948 NCT

Received  
NCT-000948 21 Mar 11 Page 1 of 1

## 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/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B



## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, China

Report No: NCR-000991

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 17-Mar-2011

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

NCR #: ZPMC-0949

## Type of problem:

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

Bridge No: 34-0006

Component: East Anchorage Bearing Blocks - APBB1

Reference Description: Missed VT Indications Discovered by QA on Lift 14 East Anchorage Bearing Blocks

## Description of Non-Conformance:

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See attached photos for details

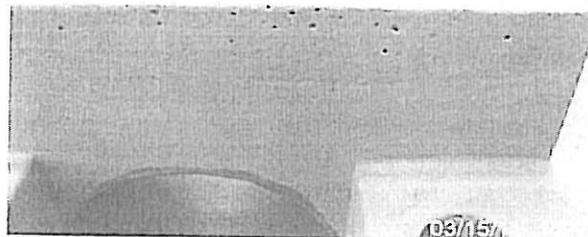
APBB-057-1

Width=10mm, Length 15mm, Depth =3mm with a visual indication inside.



APBB-082-10

Porosity ranging from 1mm-3mm throughout the Block



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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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(Continued Page 2 of 2)

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**Applicable reference:**

Special Provisions Section 10-1.59 [Castings]

**Examination-Visual**

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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."

**Who discovered the problem:** Manuel Teall

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

**Time and method of notification:** 15:00\_3/17/11\_Email

**Name of Caltrans Engineer notified:** Sean Eagen

**Time and method of notification:** 18:00\_3/17/11\_Email

**QC Inspector's Name:** Wang Lu

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

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

NA

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Devey,Jim	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-41311		DATE 日期 2011.04.14		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: APBB1 bearing plate			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> , 2011			
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 DA-400S	SERIAL NO. 连续编号 17372			
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	<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	ASTM-A148 250mm			
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	NA			
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			
121-11				ACC.		100%MT
Base metal per B-WR20307						
BLANK						
EXAMINED BY 主探 Wang Wei <u>Wang Wei</u> 2011.04.14			REVIEWED BY 审核 <u>Gu Yun Wu</u> 2011.04.14			
LEVEL - II SIGN 签名 / DATE 日期			LEVEL-II SIGN / DATE 日期			
质量经理 / QCM <u>[Signature]</u>			用户 CUSTOMER			
签字 SIGN / 日期 DATE			签字 SIGN / 日期 DATE			



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-38841		DATE日期 2011.04.14	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: APBB1 bearing plate		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> , 2011	
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 DA-400S	SERIAL NO. 连续编号 17372	
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	<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	ASTM-A148 250mm	
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	NA	

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			
082-10				ACC.		100%MT
083-2				ACC.		100%MT
057-1				ACC.		100%MT
082-2				ACC.		100%MT
082-1				ACC.		100%MT
121-3				ACC.		100%MT
064-11				ACC.		100%MT
099-16				ACC.		100%MT
051-1				ACC.		100%MT

Base metal per B-WR20307

BLANK

EXAMINED BY主探 Wang Wei <i>Wang Wei</i> 2011.04.14 LEVEL - II SIGN 签名 / DATE日期	REVIEWED BY审核 <i>Gu Jun</i> 2011.04.14 LEVEL-II SIGN / DATE日期
质量经理 / QCM <i>Lu J. An</i>	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

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Quality Assurance and Source Inspection



Bay Area Branch  
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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, China**Report No:** NCS-000972**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-May-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0949**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-Mar-2011**Description of Non-Conformance:**

During the Quality Assurance Visual Testing (VT) verification of the APBBs after blasting, this Quality Assurance Inspector (QA) discovered the following issue:

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- The APBBs have been visually tested and accepted by ZPMC QC. According to the contract documents, all castings shall be visually tested 100% on all surfaces.

See attached photos for details

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

Contractor will repair the damaged areas, offer for re-inspection and submit NDT reports to prove the repair is acceptable. The QC personnel involved will be reminded to ensure visual inspection must be carried out thoroughly.

**Corrective action taken:**

ZPMC repaired the damaged area and re-inspected and accepted by QA. NDT reports were submitted showing the repair is acceptable. Internal NCR issued to the QC involved.

**Did corrective action require Engineer's approval?** Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**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 Wahbeh, Mazen 818-292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Ng,Michael	Quality Assurance Inspector
<b>Reviewed By:</b>	Wahbeh,Mazen	QA Reviewer

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