

**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-000838

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

**Date:** 10-Sep-2010

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

**NCR #:** ZPMC-0800

### 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> Suspender Bracket SB020-080
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Missed Transverse UT Indication

### Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located in fabrication bay 19, this Quality Assurance Inspector (QA) discovered the following issue:

-One (1) Class "A" transverse indication with crack like characteristics measuring approximately 15 mm in length.

-The db rating is +5.

-The weld is identified as SB020-080-004.

-The weld is a Complete Joint Penetration (CJP) Tee Joint joining the suspender bracket vertical connection plate (X57BC) to the top plate (X53B).

-The thickness of the vertical connection plate in way of the weld is 22mm.

-The "Y" location is approximately 145mm measured from the end of the joint (Looking West).

-The indication is clearly marked by QA near the weld.

The Notice of Witness Inspection Number (NWIT) is 006632. The indication is located inside the area that has been previously tested and accepted by ZPMC (QC) personnel. ZPMC's QC personnel performed 100% UT inspection of this weld, due to indications found in the required 25% length of testing.



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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Applicable reference:**

AWS D1.5-2002, Section 6, Table 6.3. Specifies a class A indication as having a db rating of +8 and lower for weld thicknesses 20mm through 38mm.

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:** Hiranch Patel

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

**Time and method of notification:** 1600 hours\_09/10/10\_Verbal

**Name of Caltrans Engineer notified:** Laraine Woo

**Time and method of notification:** 1500 hours\_09/12/10\_Email

**QC Inspector's Name:** Mr. Lay Tao

**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**  
 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:** 13-Sep-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-0800

**Job Name:** SAS Superstructure  
**Document No:** 05.03.06-000795

**Reference Description:** Missed Transverse UT Indication

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:**

**Remarks:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located in fabrication bay 19, Caltrans Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Class "A" transverse indication with crack like characteristics measuring approximately 15 mm in length.
- The db rating is +5.
- The weld is identified as SB020-080-004.
- The weld is a Complete Joint Penetration (CJP) Tee Joint joining the suspender bracket vertical connection plate (X57BC) to the top plate (X53B).
- The thickness of the vertical connection plate in way of the weld is 22mm.
- The "Y" location is approximately 145mm measured from the end of the joint (Looking West).
- The indication is clearly marked by QA near the weld.

The Notice of Witness Inspection Number (NWIT) is 006632. The indication is located inside the area that has been previously tested and accepted by ZPMC (QC) personnel. ZPMC's QC personnel performed 100% UT inspection of this weld, due to indications found in the required 25% length of testing.

**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:** Laraine Woo Transportation Engineer

**Attachments:** ZPMC-0800

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, 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:** 05.03.06-000795

**Subject:** NCR No. ZPMC-0800

**Dated:** 23-Sep-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000793 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC has repaired the missed indications and is providing the WWR used at the time to repair the weld and the UT report performed after to show that the weld is acceptable.

ZPMC has repaired the missed indications and is providing the WWR used at the time to repair the weld and the UT report performed after to show that the weld is acceptable. To prevent future occurrences ZPMC has written an internal NCR and the inspector who missed the indications has been identified and his performance will be monitored to ensure that he does not continue a pattern of missed indications. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000793R00;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 07-Oct-2010

The proposed resolution is acceptable. This NCR is considered closed.

**Submitted by:** Woo, Laraine

**Date:** 07-Oct-2010

**Attachment(s):**



No. B-893

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-9-23**

**REGARDING: NCR-000838 (ZPMC-0800)**

For this case, ZPMC has issue an internal NCR to address this issue. The missed indications now have been repaired and were tested to be acceptable. The CWR number is B-CWR1899. ZPMC is providing NDT record for review. Based on this, please consider closure of this NCR.

**ATTACHMENT:**

NCR-000838 (ZPMC-0800)

B787-UT-15051R3

B787-MT-27092

*Handwritten signature*  
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2010-9-23



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:** 13-Sep-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:** 05.03.06-000795

**Subject:** NCR No. ZPMC-0800

**Reference Description:** Missed Transverse UT Indication

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:**

### Remarks:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located in fabrication bay 19, Caltrans Quality Assurance Inspector (QA) discovered the following issue:

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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. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Laraine Woo Transportation Engineer

**Attachments:** ZPMC-0800

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

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 DIVISION OF ENGINEERING SERVICES  
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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, China

**Report No:** NCR-000838

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

**Date:** 10-Sep-2010

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

**NCR #:** ZPMC-0800

### Type of problem:

**Welding**  **Concrete**  **Other**

**Welding**  **Curing**  **Procedural**

**Joint fit-up**  **Coating**  **Other**

**Procedural**  **Procedural**  **Description:**

**Bridge No:** 34-0006

**Component:** Suspender Bracket SB020-080

**Reference Description:** Missed Transverse UT Indication

### Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located in fabrication bay 19, this Quality Assurance Inspector (QA) discovered the following issue:

-One (1) Class "A" transverse indication with crack like characteristics measuring approximately 15 mm in length.

-The db rating is +5.

-The weld is identified as SB020-080-004.

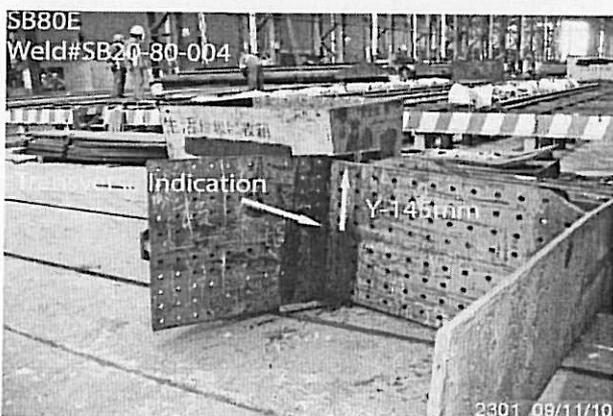
-The weld is a Complete Joint Penetration (CJP) Tee Joint joining the suspender bracket vertical connection plate (X57BC) to the top plate (X53B).

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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**Applicable reference:**

AWS D1.5-2002, Section 6, Table 6.3. Specifies a class A indication as having a db rating of +8 and lower for weld thicknesses 20mm through 38mm.

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:** Hiranch Patel

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

**Time and method of notification:** 1600 hours\_09/10/10\_Verbal

**Name of Caltrans Engineer notified:** Laraine Woo

**Time and method of notification:** 1500 hours\_09/12/10\_Email

**QC Inspector's Name:** Mr. Lay Tao

**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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**Inspected By:** Devey,Jim SMR

**Reviewed By:** Wahbeh,Mazen SMR

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ZPMC-0800



## REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-27092		DATE 日期 2010.09.22		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: SB80E SUPPORT BEAM			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			
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 KOREA	MODEL NO. 样式编号 MP-A2L	SERIAL NO. 连续编号 MP1644			
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	A709M-345T2-X  20/22mm			
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT			
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			
SB020-080-004				ACC.		100%MT
BLANK						
EXAMINED BY 主探 Sun Gongchang <u>Sun Gongchang</u> LEVEL - II SIGN 签名 / DATE 日期 20/0.09.22 质量经理 / QCM <u>Lu Jianhua</u> 签字 SIGN / 日期 DATE 20/0.09.22			REVIEWED BY 审核 <u>Sil Weh</u> LEVEL-II SIGN / DATE 日期 20/0.09.22 用户 CUSTOMER 签字 SIGN / 日期 DATE			

2PMC-0800



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-15051R3      DATE 2010.09.22      PAGE 1 OF 1      Revision No: 0

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

ITEMS NAME: 部件名称	SUPPORT BEAM	DRAWING NO.: 图号	SB80E	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号
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REFERENCING CODE 参考规范 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3)	PROCEDURE NO. 程序编号 ZPQC-UT-01
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WELDING PROCESS 焊接方法 SMAW	JOINT TYPE 焊缝类型 T-JOINT	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010
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EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 071565311, 061488510, 061495811, 070152011,
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CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T2 <span style="float: right;">20/22mm</span>
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### TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5      0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									a	b	c	d	Length 长度		
SB020-080-004	1R3	71				44								ACC.	100%

AFTER B-CWR1899

BLANK


EXAMINED BY 主探 <i>Xu Jiahua</i>	REVIEWED BY 审核 <i>B. Liming</i>
LEVEL - II SIGN / DATE 20/0.09.22	LEVEL - II SIGN / DATE 20/0.09.22

质量经理 / QCM <i>Xu Jiahua</i>	用户 CUSTOMER
签字 SIGN / 日期 DATE 20/0.09.22	签字 SIGN / 日期 DATE

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A


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**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION**


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**Location:** Changxing Island, Shanghai, China**Report No:** NCS-000818**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0800**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:** 10-Sep-2010**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located in fabrication bay 19, this Quality Assurance Inspector (QA) discovered the following issue:

-One (1) Class "A" transverse indication with crack like characteristics measuring approximately 15 mm in length.

-The db rating is +5.

-The weld is identified as SB020-080-004.

-The weld is a Complete Joint Penetration (CJP) Tee Joint joining the suspender bracket vertical connection plate (X57BC) to the top plate (X53B).

-The thickness of the vertical connection plate in way of the weld is 22mm.

- The "Y" location is approximately 145mm measured from the end of the joint (Looking West).

-The indication is clearly marked by QA near the weld.

The Notice of Witness Inspection Number (NWIT) is 006632. The indication is located inside the area that has been previously tested and accepted by ZPMC (QC) personnel. ZPMC's QC personnel performed 100% UT inspection of this weld, due to indications found in the required 25% length of testing.

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

Contractor proposes to repair the missed indications, and provide the Welding Repair Report. UT also will be performed by the contractor to show the weld is acceptable. Contractor will identify the inspector, and issue an NCR to him. His performance will be monitored to ensure he will not miss the indications continuously.

**Corrective action taken:**

Contractor repaired the indications with WWR document support. UT was performed after repaired. UT report showed the weld is acceptable. Contractor also identified the inspector, and issued an internal NCR to him. His performance is monitored.

**Did corrective action require Engineer's approval?**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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

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**Inspected By:**    Ng,Michael

Quality Assurance Inspector

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**Reviewed By:**    Wahbeh,Mazen

QA Reviewer