

**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-000834  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV **Date:** 07-Sep-2010  
**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0796

**Type of problem:**

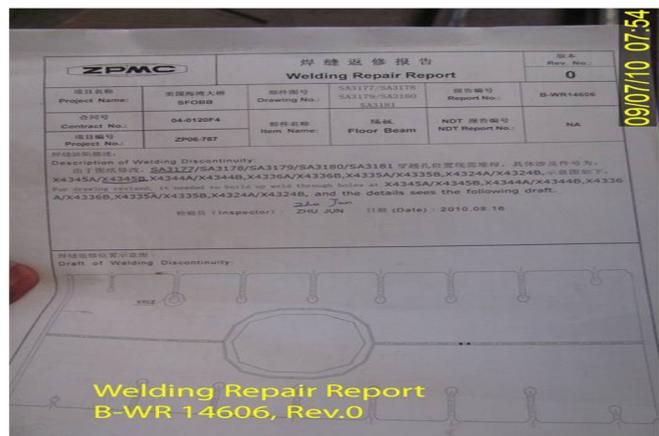
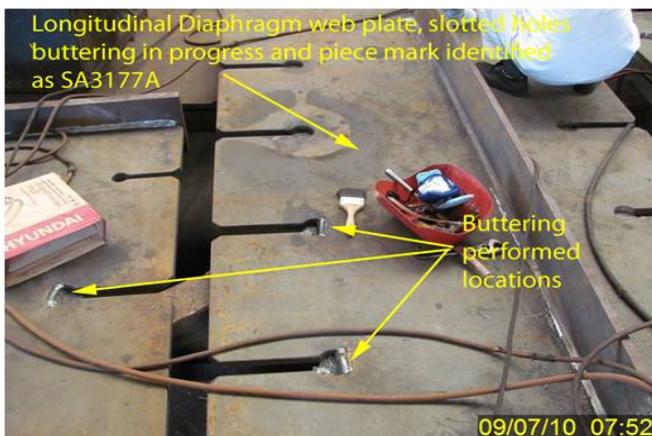
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> 13AW SA Diaphragms
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Base Metal Repair without Prior Approval from Engineer

**Description of Non-Conformance:**

- During Quality Assurance Inspection of fabrication in Bay#2 QA discovered the following issue:
- Base metal repair being performed by ZPMC personnel without Engineers approval.
  - The base metal repairs were being performed in the area of the cope holes at the top of the stiffener pass through slots in the web plates.
  - ZPMC is building up the inside of all the cope areas to accommodate a drawing revision.
  - Additionally ZPMC did not appear to prepare the edge of the material in a manner suitable for building up the edges as specified in ABF submittal 200.
  - The members are identified as SA3177A, SA3177B, SA3179A, SA3179B, SA3178A, SA3178B, SA3158A and SA3177B.
  - ZPMC personnel were performing the weld repairs per Weld Repair Report (WRR) B-WR14606.
  - The Longitudinal Diaphragm components are located in Bay 2.

Reference attached pictures.



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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 3.7.4 "Prior approval of the Engineer shall be obtained for repairs to base metal...or for a revised design to compensate for deficiencies."

**Who discovered the problem:** Nagalingam Pandaram Pillai

**Name of individual from Contractor notified:** Huang Wenguang

**Time and method of notification:** 10:00 hours, 09-07-2010, Verbal

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

**Time and method of notification:** 10:30 hours, 09-08-2010, Email

**QC Inspector's Name:** Zhong wei

**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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## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000791

**Subject:** NCR No. ZPMC-0796

**Dated:** 12-Oct-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000803 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC acknowledges that base metal repairs require Engineer approval. In this case, the floor QC thought that since this repair was the result of drawings revisions a WRR was sufficient.

ZPMC acknowledges that base metal repairs require Engineer approval. In this case, the floor QC thought that since this repair was the result of drawings revisions a WRR was sufficient. This point has been clarified to prevent future occurrences. Subsequently ZPMC has submitted and received an approved CWR for this work. ZPMC is providing NDT after the repair to show that work done is acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000803R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 13-Oct-2010

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

**Submitted by:** Woo, Laraine

**Date:** 13-Oct-2010

**Attachment(s):**



No. B-902

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-10-11**

**REGARDING: NCR-000834(ZPMC-0796)**

This problem occurred by the misunderstanding of the requirement of the approval of engineer prior to performing base metal repairing by site QC. ZPMC QA personnel have talked with the site QC to address this requirement according to AWS D1.5. ZPMC has submitted and got the approved CWR for the repairing works after then. ZPMC is providing the NDT records to show the soundness of these base metal after repair. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000834(ZPMC-0796)

B787-MT-28853

B787-UT-15373

*Handwritten signature*

*10/11/2010*



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:** 09-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-0796

**Job Name:** SAS Superstructure  
**Document No:** 05.03.06-000791

**Reference Description:** Base Metal Repair without Prior Approval from Engineer

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:** 13

### Remarks:

During Quality Assurance Inspection of fabrication in Bay#2 QA discovered the following issue:

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-The base metal repairs were being performed in the area of the cope holes at the top of the stiffener pass through slots in the web plates.

-ZPMC is building up the inside of all the cope areas to accommodate a drawing revision.

-Additionally ZPMC did not appear to prepare the edge of the material in a manner suitable for building up the edges as specified in ABF submittal 200.

-The members are identified as SA3177A, SA3177B, SA3179A, SA3179B, SA3178A, SA3178B, SA3158A and SA3177B.

-ZPMC personnel were performing the weld repairs per Weld Repair Report (WRR) B-WR14606.

-The Longitudinal Diaphragm components are located in Bay 2.

### Action Required and/or Action Taken:

Proposed a resolution for the identified non-conformance with revised procedure 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-0796

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

**Location:** Changxing Island, Shanghai, China

**Report No:** NCR-000834

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

**Date:** 07-Sep-2010

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

**NCR #:** ZPMC-0796

**Type of problem:**

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

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

**Bridge No:** 34-0006

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

**Component:** 13AW SA Diaphragms

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

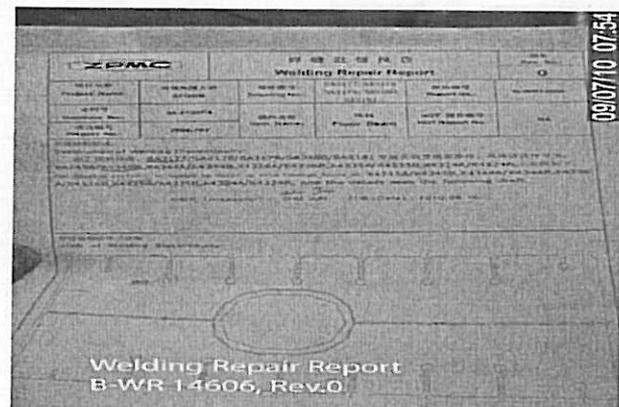
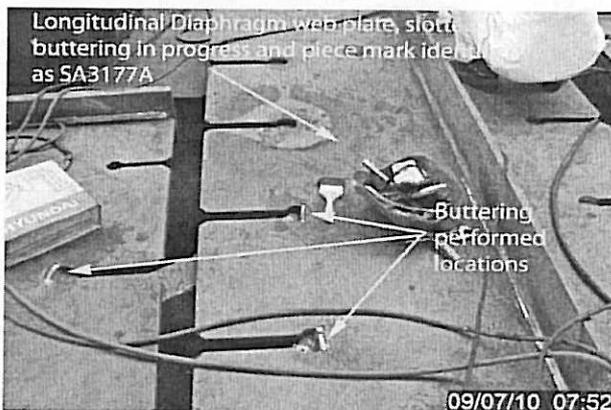
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Reference attached pictures.

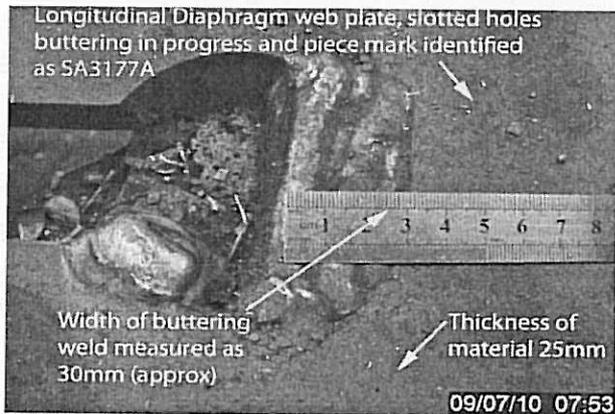


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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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AWS D1.5 2002, Section 3.7.4 "Prior approval of the Engineer shall be obtained for repairs to base metal...or for a revised design to compensate for deficiencies."

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**Time and method of notification:** 10:30 hours, 09-08-2010, Email

**QC Inspector's Name:** Zhong wei

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

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

NA

### Comments:

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**Inspected By:** Devey, Jim

SMR

**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-28853		DATE日期 2010.10.02	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: SA3177/3178/3179/3180/3181 FLOOR 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 Y6-YOKE	SERIAL NO. 连续编号 15207	
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 25/90/100 mm	
WELDING PROCESS 焊接方法	NA	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			
X4345A				ACC.		100%MT
X4345B				ACC.		100%MT
X4344A				ACC.		100%MT
X4344B				ACC.		100%MT
X4336A				ACC.		100%MT
X4336B				ACC.		100%MT
X4335A				ACC.		100%MT
X4335B				ACC.		100%MT
X4324A				ACC.		100%MT
X4324B				ACC.		100%MT

BASE METAL PER B-CWR1815

BLANK


EXAMINED BY 主操 Xie Genlin <i>Xie Genlin 2010.10.02</i> LEVEL - II SIGN 签名 / DATE 日期 质量经理 / QCM 签字 SIGN / 日期 DATE	REVIEWED BY 审核 <i>[Signature]</i> 2010.10.02 LEVEL-II SIGN / DATE 日期 用户 CUSTOMER 签字 SIGN / 日期 DATE
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# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-15373      DATE 2010.09.22      PAGE 1 OF 2      Revision No: 0

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

ITEMS NAME: FLOOR BEAM      DRAWING NO.: SA3177/3178/3179 /3180/3181      CALTRANS CONTRACT NO.: 04-0120F4  
 部件名称      图号      加州工程编号

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

WELDING PROCESS 焊接方法 NA      JOINT TYPE 焊缝类型 NA      CALIBRATION DUE DATE 仪器校正有效期 Dec. 28<sup>ST</sup>, 2010

EQUIPMENT 设备 UT SCOPE      MANUFACTURER 制造商 PANAMETRICS      MODEL NO. 样式编号 EPOCH4B      SERIAL NO. 序列编号 071565511

CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II      COUPLANT 耦合剂 C.M.C      MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 25mm

### 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
GE	70°	2.5MHz	18×18mm				
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			Sound Path 声程
X4345A		0				20									ACC.	100%
X4345B		0				20									ACC.	100%
X4344A		0				20									ACC.	100%
X4344B		0				20									ACC.	100%
X4336A		0				20									ACC.	100%
X4336B		0				20									ACC.	100%
X4335A		0				20									ACC.	100%
X4335B		0				20									ACC.	100%

EXAMINED BY 主探 *[Signature]* 2010.09.22      REVIEWED BY 审核 *[Signature]* 2010.09.22  
 LEVEL - II SIGN / DATE      LEVEL - II SIGN / DATE

质量经理 / QCM *[Signature]* 2010.09.22      用户 CUSTOMER \_\_\_\_\_  
 签字 SIGN / 日期 DATE      签字 SIGN / 日期 DATE



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


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**Location:** Changxing Island, Shanghai, China**Report No:** NCS-000774**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Oct-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0796**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:** 07-Sep-2010**Description of Non-Conformance:**

During Quality Assurance Inspection of fabrication in Bay#2 QA discovered the following issue:

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- The members are identified as SA3177A, SA3177B, SA3179A, SA3179B, SA3178A, SA3178B, SA3158A and SA3177B.
- ZPMC personnel were performing the weld repairs per Weld Repair Report (WRR) B-WR14606.
- The Longitudinal Diaphragm components are located in Bay 2.

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

- ZPMC QA personnel talked with on-site QC to address the requirement of "prior approval of the engineer".
- Submit Critical Weld Repair (CWR) for the job record.
- Repair and inspect accordingly to the CWR.

**Corrective action taken:**

- Discussed the issue with onsite QC staff.
- Performed repair and inspection according to the approved critical weld repair.

**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the

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# QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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Office of Structural Materials for your project.

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**Inspected By:** Tsang, Eric

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer

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