

**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-000881  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV **Date:** 28-Oct-2010  
**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0843

**Type of problem:**

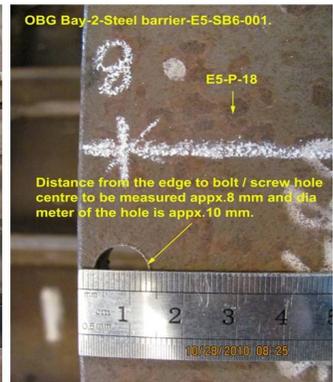
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Steel Barrier E5-SB6-001
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** The fabricated dimension of a plate on Steel Barrier E5-SB6-001 is different from the approved shop drawing dimension and the bolt hole size

**Description of Non-Conformance:**

During Quality Assurance (QA) random in-process observations of the fabrication of OBG Steel Barrier, this Caltrans (CT) QA Inspector observed dimensional discrepancies between the approved shop drawings and fabrication. Specific details describing the discrepancies are provided below:

- The measured dimensions of the flange of the plate identified as E5-P-18 on approved shop drawing E5 SBX2 does not match that detailed. The width of the flange was measured at 192mm, in contrast to the 212mm detailed width.
- Bolt holes detailed as 13.5mm diameter holes were measured to be 10mm in diameter. A total of eight bolt holes did not conform to the detailed diameter.
- Additionally, the edge distance from the center of the bolt hole to the edge of the flame cut flange was measured at approximately 8mm when a minimum of 24mm is required by Contract for the detailed hole size.
- The flange plate Material thickness is 12 mm.
- Steel Barrier E5-SB6-001 is currently located in Bay 2.



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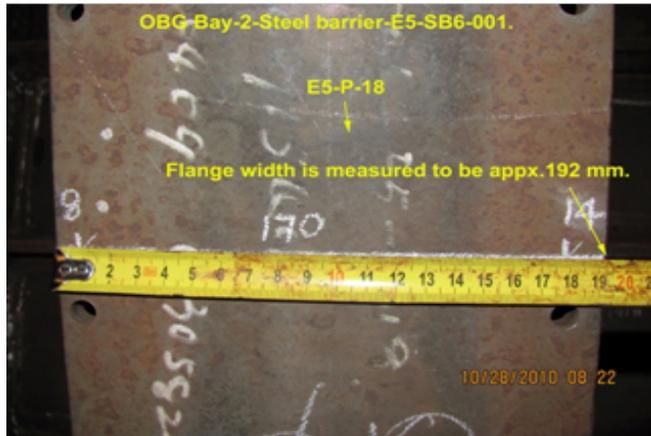
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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Applicable reference:**

-Approved shop Drawings: E5-SB6 and E5-SBX2.

-Contract Plan Sheet 625C, 'Typical Girder Details No. 1', Bolt Dimension Table specifies minimum edge distance of 1.75d for flame cut edges.

**Who discovered the problem:** Surendra Prabhu

**Name of individual from Contractor notified:** Mike Williams, Wang Wen Bin

**Time and method of notification:** 10:30\_10/28/10\_Verbal

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

**Time and method of notification:** 11:00 hours, 10/29/10, Email

**QC Inspector's Name:** Zhu Lin

**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Tsang, Eric	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:** 05.03.06-000838

**Subject:** NCR No. ZPMC-0843

**Dated:** 18-Nov-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000837 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has repaired the issues noted in the NCR through addition of weld metal to the flange to increase the edges distance from the bolt hole.

ZPMC has repaired the issues noted in the NCR through addition of weld metal to the flange to increase the edges distance from the bolt hole. The flange with of EP-5-18 was left as is per the Department's response in China. ZPMC is providing the NDT to show that the built up area is acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000837R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 21-Nov-2010

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

**Submitted by:** Woo, Laraine

**Date:** 21-Nov-2010

**Attachment(s):**



TRANSMITTAL LETTER

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

DATE:2010-11-18

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-929
- (02) NCR-000881(ZPMC-0843)
- (03) B787-UT-17410
- (04) B787-MT-31888

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:

Rosemary

COMPANY:



DATE: 10:28

DELIVERED 18 NOV 2010

PHONE NO.

PLAN NUMBER:N/A  
#R787-QCP-102



No. B-929

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-11-18**

**REGARDING: NCR-000881(ZPMC-0843)**

ZPMC acknowledged this problem and addressed this issue by writing an internal NCR. ZPMC has fixed this problem by buttering the flange edge according to an approved CWR. ZPMC is providing the NDT records to show the acceptance of this plate after repair. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000881(ZPMC-0843)

B787-UT-17410

B787-MT-31888

*fy* *rw*  
11/18/2010

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

**Report No:** NCR-000881

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

**Date:** 28-Oct-2010

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

**NCR #:** ZPMC-0843

**Type of problem:**

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

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

**Bridge No:** 34-0006

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

**Component:** Steel Barrier E5-SB6-001

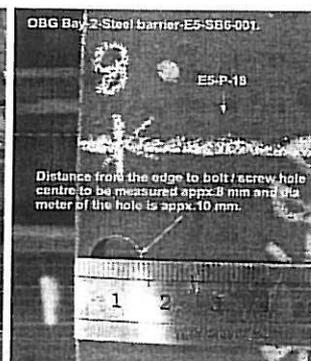
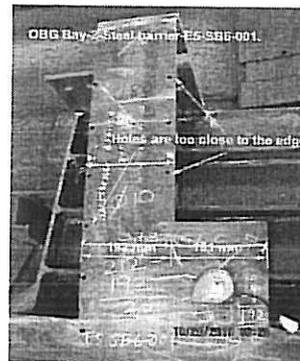
**Procedural**  **Procedural**  **Description:**

**Reference Description:** The fabricated dimension of a plate on Steel Barrier E5-SB6-001 is different from the approved shop drawing dimension and the bolt hole size

**Description of Non-Conformance:**

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- Bolt holes detailed as 13.5mm diameter holes were measured to be 10mm in diameter. A total of eight bolt holes did not conform to the detailed diameter.
- Additionally, the edge distance from the center of the bolt hole to the edge of the flame cut flange was measured at approximately 8mm when a minimum of 24mm is required by Contract for the detailed hole size.
- The flange plate Material thickness is 12 mm.
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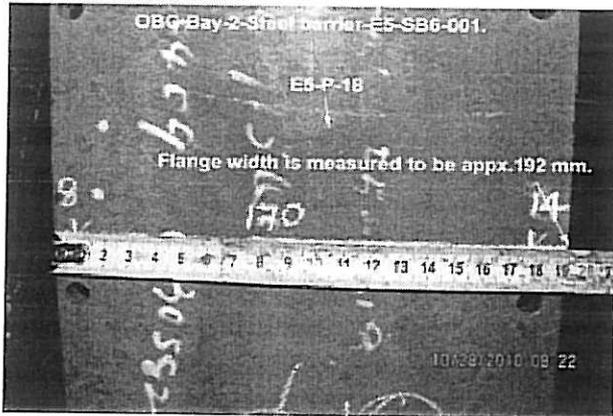


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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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**Applicable reference:**

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

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

**Comments:**

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<b>Inspected By:</b> Tsang, Eric	SMR
<b>Reviewed By:</b> Wahbeh, Mazen	SMR

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# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-17410      DATE 2010.11.03      PAGE 1 OF 1      Revision No: 0

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

ITEMS NAME: STEEL BARRIER      DRAWING NO.: E5-SB6      CALTRANS CONTRACT NO.: 04-0120F4  
 部件名称      图号      加州工程编号

REFERENCING CODE 参考规范      ACCEPTANCE STANDARD 接受标准      PROCEDURE NO. 程序编号  
 AWS D1.5-2002      AWS D1.5-2002(Table 6.3)      ZPQC-UT-01

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

EQUIPMENT 设备      MANUFACTURER 制造商      MODEL NO. 样式编号      SERIAL NO. 序列编号  
 UT SCOPE      AMERICA      EPOCH 4B      071565311

CALIBRATION BLOCK 试块      COUPLANT 耦合剂      MATERIAL/THICKNESS 材料厚度  
 AWS IIW BLOCK TYPE II      C.M.C      A709M-345T2-X      12/20mm

### 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
AMERICA	70°	2.25MHz	0.75in×0.625in				
Changchao	0°	2.5MHz	25mm	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
E5-SB6		71					47								ACC.	100%
		0					20								ACC.	100%

BASE METAL PER B-CWR2094

BLANK


EXAMINED BY 主探 Xu Longgang 2010.11.03      REVIEWED BY 审核 Tang Kingshan 2010.11.03

LEVEL - II SIGN / DATE      LEVEL - II SIGN / DATE

质量经理 / QCM Lu Jianhua 2010.11.03      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-31888		DATE 日期 2010.11.01		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: E5-P-18 E5-SB6			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	A709-345F2-X  12/20mm			
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			
E5-P-18				ACC.		100%MT
BASE MATER PER B-CWR2094						
EXAMINED BY 主探 GU YUNWU <i>Gu Yunwu 2010.11.01</i>			REVIEWED BY 审核 <i>Wangwei 2010.11.01</i>			
LEVEL - II SIGN 签名 / DATE 日期 质量经理 / QCM <i>Lu Jionhua 2010.11.01</i>			LEVEL-II SIGN / DATE 日期 用户 CUSTOMER			
签字 SIGN / 日期 DATE			签字 SIGN / 日期 DATE			

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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, P.R. China**Report No:** NCS-000832**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Nov-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0843**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:** 28-Oct-2010**Description of Non-Conformance:**

During Quality Assurance (QA) random in-process observations of the fabrication of OBG Steel Barrier, this Caltrans (CT) QA Inspector observed dimensional discrepancies between the approved shop drawings and fabrication. Specific details describing the discrepancies are provided below:

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-Additionally, the edge distance from the center of the bolt hole to the edge of the flame cut flange was measured at approximately 8mm when a minimum of 24mm is required by Contract for the detailed hole size.

-The flange plate Material thickness is 12 mm.

-Steel Barrier E5-SB6-001 is currently located in Bay 2.

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

Leave the flange plate as-built upon approval by the Engineer. ZPMC to make up the required bolt hole edge distance by buttering. Perform NDT to prove the built up area is acceptable.

**Corrective action taken:**

Construction/Design considered the incorrect dimensions of the flange plate are acceptable and can be left as-built. The inadequate edge distance has been made up by buttering. NDT report submitted by Contractor showed the repair is satisfactory.

**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:**

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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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