

**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 #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000420**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 26-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0394**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> OBG Segment 9DW Side Panels
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Heat Straightening not according to the Heat Straightening Procedure**Description of Non-Conformance:**

This Quality Assurance Inspector (QA) observed that the contractor is deviating from the AWS D1.5 Code requirements for heat straightening. The contractor used an overhead crane to lift one end of a side panel while local heat was being applied. This method deviated from the ZPMC Heat Straightening Report (HSR1) #7439. The side panel in question is for OBG Segment 9DW (SEG 055A) with Side Panels designation SP772B, SP732B, SP494B, and SP672B. The weld being heated in the photograph below is weld number 013.

**Applicable reference:**

Applicable reference: AWS D1.5 Section 3.7.3: "Members distorted by welding shall be straightened by mechanical means or by carefully supervised application of a limited amount of localized heat as approved by the Engineer. The temperature of the heated areas as measured by approved methods shall not exceed 600°C [1100°F] for quenched and tempered steel nor 650°C [1200°F] (a dull, red color) for other steels. The part to be heated for straightening shall be substantially free of stress and from external forces, except those stresses resulting from the mechanical straightening method used in conjunction with the application of heat."

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Who discovered the problem:** Tim McClendon  
**Name of individual from Contractor notified:** Li Man Kit  
**Time and method of notification:** 1300 hours, verbal  
**Name of Caltrans Engineer notified:** Ching Chao  
**Time and method of notification:** 0800 hours, verbal  
**QC Inspector's Name:** Wang Lu  
**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.

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<b>Inspected By:</b>	Tsang, Eric	SMR
<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:** 23-Sep-2009

**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:** 05.03.06-000383

**Subject:** NCR No. ZPMC-0394

**Reference Description:** Heat Straightening not according to the Heat Straightening Procedure

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:** 09

**Remarks:**

This Quality Assurance Inspector (QA) observed that the contractor is deviating from the AWS D1.5 Code requirements for heat straightening. The contractor used an overhead crane to lift one end of a side panel while local heat was being applied. This method deviated from the ZPMC Heat Straightening Report (HSR1) #7439. The side panel in question is for OBG Segment 9DW (SEG 055A) with Side Panels designation SP772B, SP732B, SP494B, and SP672B. The weld being heated in the photograph below is weld number 013.

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

Submit repair procedure to the engineer for approval.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0394

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

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000383

**Subject:** NCR No. ZPMC-0394

**Dated:** 16-Oct-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000377 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC acknowledges the heat straightening observed deviated from the HSR1. ZPMC will submit NDT documentation showing that the welds listed were not adversely affected.

ZPMC acknowledges the heat straightening observed deviated from the HSR1. ZPMC will submit NDT documentation showing that the welds listed were not adversely affected. These documents will be submitted at a later date. ZPMC requests that this non conformance proposed resolution be approved, with action pending until documents are submitted.

**Submitted by:**

**Attachment(s):** ABF-NPR-000377R00

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**Caltrans' comments:**

**Status:** AAP

**Date:** 29-Oct-2009

The contractor's proposed resolution is accepted with actions pending to close the NCR.

**Submitted by:** Chao, Ching

**Date:** 29-Oct-2009

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Dated:** 07-Dec-2009

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

**Attention:** Pursell, Gary  
Resident Engineer

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000377 Rev: 01

**Ref:** 05.03.06-000383

**Subject:** NCR No. ZPMC-0394

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### Contractor's Proposed Resolution:

**Reference Resolution:** PMC is providing the HSR1 to show the procedure used to heat straighten and NDT documentation showing that the welds affected are acceptable.

ZPMC concurs with this NCR and the QA Department has issued an internal NCR regarding this issue. ZPMC is providing the HSR1 to show the procedure used to heat straighten and NDT documentation showing that the welds affected are acceptable. Based on this ZPMC is requesting closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000377R01;

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### Caltrans' comments:

**Status:** CLO

**Date:** 13-Dec-2009

The documentation submitted has been reviewed by the Engineer and is found to be acceptable.

**Submitted by:** Chao, Ching

**Date:** 13-Dec-2009

**Attachment(s):**



No. B-516

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2009-12-04**

**REGARDING: NCR-000420(ZPMC-0394)**

With this letter of response, ZPMC requests closure for Caltrans NCR-000420(ZPMC-0394) what mentioned that QA discovered Heat Straightening Procedure was performing not according to HSR1 for Side Plate SP772B.

ZPMC acknowledged this problem and issued interior NCR to warn this issue. And ZPMC has corrected the wrong workmanship on site. After that UT was performed to warrant weld quality. So ZPMC provided HSR1 report and NDT documentation, hoping Caltrans could take a review and consider close this NCR.

**ATTACHMENT:**

NCR-B-263(ZPMC-0394)

NCR-000420(ZPMC-0394)

HSR1(B)-7439

#787-B-QCR-202

B-VT-37715

B787-UT-8453

B787-UT-8453R1

*[Handwritten signature]*  
12/04/09



# Nonconformance Report

## 不符合项报告

Project Name: S.F.O.B.B  
 项目名称: 美国加州海湾大桥

NCR Number:  
 NCR 编号: NCR-B-263 (ZPMC-0394)

Item: OBG Segment 9DW Side Panels  
 名称描述: 9DW 斜底板

Item Number:  
 件号:

Drawing:  
 图号: 9DW

Location: Bay 14  
 位置: 14 车间

Date:  
 日期: 2009-9-30

**Description of Nonconformance:**

不符合项状态描述:

This Quality Assurance Inspector (QA) observed that the contractor is deviating from the AWS D1.5 Code requirements for heat straightening. The contractor used an overhead crane to lift one end of a side panel while local heat was being applied. This method deviated from the ZPMC Heat Straightening Report (HSR1) #7439. The side panel in question is for OBG Segment 9DW (SEG 055A) with Side Panels designation SP772B, SP732B, SP494B, and SP672B. The weld being heated in the photograph below is weld number 013.

加州检验员发现施工队没有按照 AWS D1.5 要求进行校火。当一块斜底板局部区域进行校火时，施工队用行车吊起斜底板的一端。这种方法不符合 ZPMC 校火报告 #7439。这块斜底板是 9DW (SEGO55A)，由 SP772B, SP732B, SP494B 和 SP672B 组成。被校火的焊缝编号是 013。

Work By:

Prepared by: *Zhang Wei*

Reviewed by QCE:

施工方: *胡元*

准备: *09.09.30*

质量工程师批准:

*Zhou Shuangbo*

Drawing Error

Material Defect

Fabrication Error

Other

图纸错误

材料缺陷

制作错误

其他原因

Disposition:

Use as is

Repair

Reject

处理措施:

回用

返修

拒收

**Recommendation:**

建议:

Prepared by:

准备

Approved by QCA:

质量经理批准

**Reason for Nonconformance:**

不符合原因:

*对拼板中心轴进行校火不符合报告要求*

The heat straightening of the splice plate didn't reach the requirement.

**Prevention of Re-occurrence:**

预防措施:

*加强内部管理，严格按照报告要求施工。*

Enhance the management, and perform according to the report's requirement.

Approved by/批准:

*李志刚*

Technical Justification for Use-As-Is/Repair:  
回用或返修的技术依据:

Attachment  
附件

Non-attachment  
无附件

请根据的板V记录7439中所述进行操作. 并对板V进行NDI检测. 如能现场检测  
Operate it per Heat Straightening Record 7439, and perform NDT to the heat straightened. <sup>weld by</sup>  
Reviewed/批准: Tang Yongbo Meanwhile, enhance the supervision of site.

Verification:  Acceptable  
确认: 可接受

Unacceptable  
不可接受

已按工艺(厚材)处理

*李志刚* zhuzhonghai

Verified by QCI/质检确认:

*李志刚*

07072

Reviewed by QCA/质检主任审核:

2008.10.22

#R787-QCP-1300

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: 23-Sep-2009  
Contract No: 04-0120F4  
04-SF-80-13.2 / 13.9  
Job Name: SAS Superstructure  
Document No: 05.03.06-000383

Dear: Mr. Charles Kanapicki  
Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
Subject: NCR No. ZPMC-0394

Reference Description: Heat Straightening not according to the Heat Straightening Procedure

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- Recurring QC issue that constitutes a systematic problem in quality control.
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Material Location: OBG

Lift: 09

### Remarks:

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### Action Required and/or Action Taken:

Submit repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0394

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  
DIVISION OF ENGINEERING SERVICES  
Office of Structural Materials  
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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-000420

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 26-Aug-2009

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

NCR #: ZPMC-0394

Type of problem:

Welding  Concrete  Other

Welding  Curing  Procedural  Bridge No: 34-0006

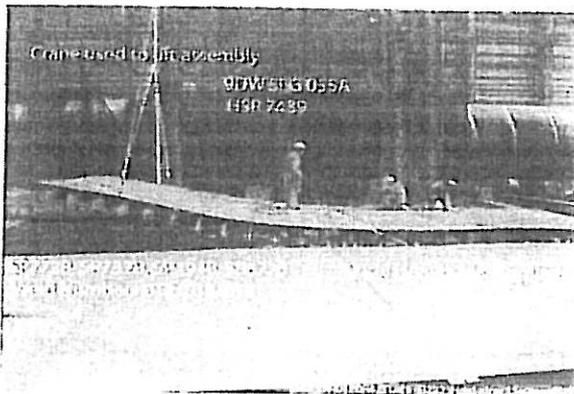
Joint fit-up  Coating  Other  Component: OBG Segment 9DW Side Panels

Procedural  Procedural  Description:

Reference Description: Heat Straightening not according to the Heat Straightening Procedure

Description of Non-Conformance:

This Quality Assurance Inspector (QA) observed that the contractor is deviating from the AWS D1.5 Code requirements for heat straightening. The contractor used an overhead crane to lift one end of a side panel while local heat was being applied. This method deviated from the ZPMC Heat Straightening Report (HSR1) #7439. The side panel in question is for OBG Segment 9DW (SEG 055A) with Side Panels designation SP772B, SP732B, SP494B, and SP672B. The weld being heated in the photograph below is weld number 013.



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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Tim McClendon

Name of individual from Contractor notified: Li Man Kit

Time and method of notification: 1300 hours, verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 0800 hours, verbal

QC Inspector's Name: Wang Lu

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



# 火工校正记录

## Heat Straightening Record (HSR1)

报告号 Record #

HSR1(B)-7439

版本号 Revision #

0

日期 Date

2009.08.28

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-0120F4

工程编号 JOB#: ZP06-787

装配 Assembly:	质检代表/Quality Control Representative
部装 Sub-Assembly:	Xi Jun
梁段 Gird: 9DW SP772B+SP732B+SP494B+SP672B	质检经理/Quality Assurance Manager-Approval
塔段 Tower: N/A	Luji...
焊缝号 Weld No: 012.013.014	
焊缝地图号 Weld Map No: SEG055A	

### 情况描述 Description of Condition

Cause原因 Welding distortion 焊接变形  
 Type of Defect缺陷类型 Welding distortion 焊接变形  
 Inspection Method检查方法 Visual 目检

### 处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

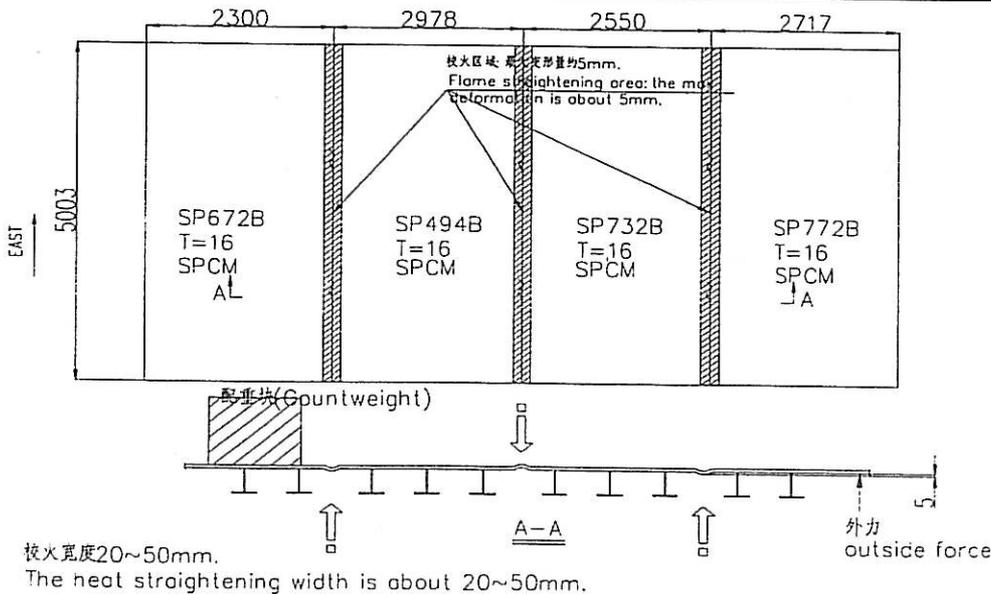
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测。

纠正措施(Corrective Action(s)): Control current, voltage and weld speed according to relevant WPS. If necessary anti-deformation or hold down device can be added. 依据相应的WPS的要求控制电流, 电压和焊接速度。如有必要, 可使用反变形设施进行校正。

实施次数(Number of application): 1~3

最高温度(Maximum temperature): <600°C

### 简图 Sketch



\*\*\*To be signed when Closing HSR~Verify compliance and all necessary reports are ready to attach\*\*\*

检验员 Inspector:	[Signature]	签字 Signature:	[Signature]
CWI #		Closing Date:	
II级探伤 NDE Certification:	Level II		
质检经理 QC Manager		审核日期 Review Date:	

Note: All repair work shall be performed in accordance with applicable CALTRANS approved procedures, contract specifications and AWS D1.5 2002.

#R787-QCP-1101

Approved by [Signature]

10.1)

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Tim McClendon  
Name of individual from Contractor notified: Li Man Kit  
Time and method of notification: 1300 hours, verbal  
Name of Caltrans Engineer notified: Ching Chao  
Time and method of notification: 0800 hours, verbal  
QC Inspector's Name: Wang Lu  
Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

N/A

### Comments:

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Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR

美国钢板平整度火工校正检查记录卡

The report of steel plate heat straightening process checking

2206-787

A739M-245F2-X

正2角

SP672B+SP494B+SP732B+SP772B

SE6055A

图号: SP672B+SP494B+SP732B+SP772B  
 图批号: SE6055A  
 图名: NA  
 图号: NA  
 图批号: NA  
 图名: NA

图号: NA  
 图批号: NA  
 图名: NA

火工校正温度控制 The temperature record of heat straightening

校正时间	8:00	8:40	9:26	10:00	13:00	13:37	14:03	14:38
校正结果	580	502	479	515	466	530	571	550

校正前平整度测量 Flatness checking before heat straightening

测量位置	1	2	3	4	5	6	7	8	9	10	11	12
测量结果	3	4	3.5	2.5	4	3	5	3.5	4	5	4	3.5

校正后平整度测量 Flatness checking after heat straightening

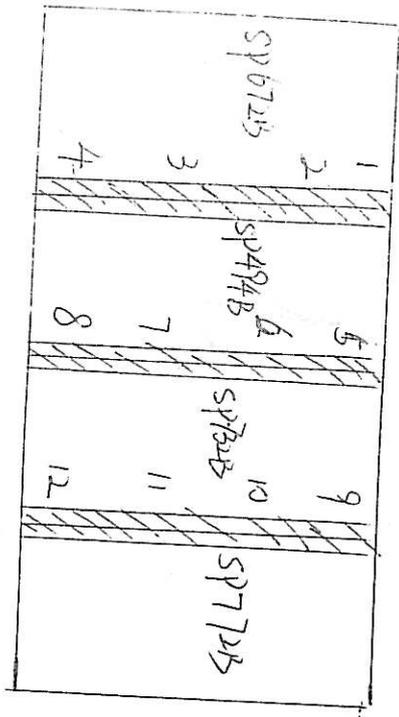
测量位置	1	2	3	4	5	6	7	8	9	10	11	12
测量结果	1	1.5	0	2	1	0	1	1	1.5	0	1	1

校正平整度/平整度是否合格 Heat straightening result: 合格

校正人: Li Ming Yang  
 日期: 09.10.18

若有不合格项, 请填写以下项目  
 If there are the following items if the straightening after heat straightening:

缺陷名称	缺陷位置	缺陷数量	缺陷描述
UT			
MT			
PT			



B-V 37715



周数 95#  
日期 2009.08.26

**Visual Weld Inspection Report**

**焊缝目视检查报告**

Girder/梁: OBG Plate Panel Splice

Tower/塔:

Quality Control Representative:  
质检代表: *[Signature]*

CWI: Zhuanghai 07072/01

Project No.: 项目名称  
San Francisco Oakland Bay Bridge 美国海湾大桥

Project No.: 项目编号:  
ZP06-787

Weld No. 焊缝编号	Welder I.D.# 焊工识别号	Location 位置	Welding consumables 焊接材料	Undercut 咬边	Porosity 气孔	Over lap 焊瘤	Crater 弧坑	Arc strike 电弧擦伤	Spatters 飞溅	Crack 裂纹	Accept or Reject 接受或拒收	Repair 返修	Accept or Reject after repair 返修后接受 或拒收
SEG055A-012	045265	IG	H14 (Ø4.8)	✓	✓	✓	✓	✓	✓	✓	ACC	NA	NA
SEG055A-013	250050	IG	H14 (Ø4.8)	✓	✓	✓	✓	✓	✓	✓	ACC	NA	NA
SEG055A-014	045265	IG	H14 (Ø4.8)	✓	✓	✓	✓	✓	✓	✓	ACC	NA	NA

质  
质控制经理: *[Signature]*

After root weld

After cover pass

After CWR or WRR No.:

After HSR No.: HSRI (B) -7439

Others

#R787-QCP-603

"✓" is no defects. "X" is defects. "NA" is not applicable.





# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-8453      DATE 2009.08.27      PAGE 2 OF 3      Revision No: 0

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	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
SEG055A-007	6	70	A	2	45	34	3	+8	20	63	12	-6	1807	REJ.	100%
	7	70	A	2	44	34	3	+7	20	71	10	+4	2469	REJ.	100%
	8	70	A	1	43	34	1	+8	20	42	12	-3	3015	REJ.	100%
	9	70	A	2	46	34	4	+8	20	81	5	+5	3393	REJ.	100%
	10	70	A	2	45	34	4	+7	20	82	4	0	4007	REJ.	100%
SEG055A-008	1	70	A	1	43	34	1	+8	20	34	11	-7	107	REJ.	100%
	2	70	A	2	42	34	3	+5	20	68	11	-6	456	REJ.	100%
	3	70	A	2	44	34	3	+7	20	65	12	-5	1751	REJ.	100%
	4	70	A	1	42	34	0	+8	20	30	9	-5	1931	REJ.	100%
	5	70	A	2	44	34	3	+7	20	61	13	-6	4105	REJ.	100%
	6	70	A	2	45	34	3	+8	20	63	12	+3	4369	REJ.	100%
	7	70	A	2	45	34	3	+8	20	65	11	0	4701	REJ.	100%
SEG055A-017	1	70	A	2	45	34	5	+6	20	83	5	+3	1037	REJ.	100%
	2	70	A	1	42	34	3	+5	20	63	12	+4	1469	REJ.	100%
SEG055A-018		70				34								ACC.	100%
SEG055A-019	1	70	A	1	41	34	0	+7	20	27	8	+3	1037	REJ.	100%
	2	70	A	1	43	34	3	+6	20	62	12	-7	1417	REJ.	100%
	3	70	A	1	40	34	1	+5	20	40	13	+4	1607	REJ.	100%
	4	70	A	2	44	34	3	+7	20	69	10	-7	2319	REJ.	100%
	5	70	A	2	45	34	3	+8	20	70	10	+3	2807	REJ.	100%
	6	70	A	1	43	34	1	+8	20	39	13	+4	3119	REJ.	100%
	7	70	A	2	42	34	3	+5	20	72	9	-7	4053	REJ.	100%

EXAMINED BY 主探 <i>Jin Feng</i>	REVIEWED BY 审核 <i>Sun Y</i>
LEVEL - II SIGN / DATE <i>07.08.27</i>	LEVEL - II SIGN / DATE <i>07.08.27</i>
质量经理 / QCM <i>[Signature]</i>	用户 CUSTOMER  
签字 SIGN / 日期 DATE <i>J.F. 8.31</i>	签字 SIGN / 日期 DATE



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-8453      DATE 2009.08.27      PAGE 3 OF 3      Revision No: 0

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		
SEG055A-012		70				34								ACC.	100%
SEG055A-013	1	70	A	2	46	34	5	+7	20	86	4	-7	236	REJ.	100%
	2	70	A	2	46	34	5	+7	20	86	4	-7	478	REJ.	100%
	3	70	A	2	47	34	5	+8	20	86	4	-8	1059	REJ.	100%
	4	70	A	2	44	34	5	+5	20	88	4	-7	3147	REJ.	100%
	5	70	A	2	47	34	5	+8	20	87	4	-8	3607	REJ.	100%
SEG055A-014	1	70	A	2	45	34	3	+8	20	60	12	+3	1031	REJ.	100%
	2	70	A	1	41	34	0	+7	20	31	10	+5	1459	REJ.	100%
	3	70	A	1	42	34	0	+8	20	30	9	+4	4131	REJ.	100%
	4	70	A	2	44	34	3	+7	20	70	7	+9	4789	REJ.	100%
	5	70	A	1	41	34	0	+7	20	31	9	+4	4915	REJ.	100%

AFTER HSR1(B)-7444,7442,7439

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EXAMINED BY 主探 <u>Jim Teng</u> LEVEL - II SIGN / DATE 09.08.27 质量经理 / QCM <u>[Signature]</u> 签字 SIGN / 日期 DATE <u>09.08.27</u>	REVIEWED BY 审核 <u>Sam Yu</u> LEVEL - II SIGN / DATE 09.08.28 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-8453R1      DATE 2009.11.07      PAGE 2 OF 3      Revision No: 0

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
	6R1	70				33									ACC.	100%
	7R1	70				33									ACC.	100%
	8R1	70				33									ACC.	100%
	9R1	70				33									ACC.	100%
	10R1	70				33									ACC.	100%
SEG055A-008	1R1	70				33									ACC.	100%
	2R1	70				33									ACC.	100%
	3R1	70				33									ACC.	100%
	4R1	70				33									ACC.	100%
	5R1	70				33									ACC.	100%
	6R1	70				33									ACC.	100%
	7R1	70				33									ACC.	100%
SEG055A-017	1R1	70				33									ACC.	100%
	2R1	70				33									ACC.	100%
SEG055A-019	1R1	70				33									ACC.	100%
	2R1	70				33									ACC.	100%
	3R1	70				33									ACC.	100%
	4R1	70				33									ACC.	100%
	5R1	70				33									ACC.	100%
	6R1	70				33									ACC.	100%
	7R1	70				33									ACC.	100%
SEG055A-013	1R1	70				33									ACC.	100%

EXAMINED BY 主探 <i>Jin Fei</i> LEVEL - II SIGN / DATE <i>09.11.07</i>	REVIEWED BY 审核 <i>Sunwei</i> LEVEL - II SIGN / DATE <i>09.11.07</i>
质量经理 / QCM <i>Lu Jianhua 09.11.07</i> 签字 SIGN / 日期 DATE	用户 CUSTOMER  签字 SIGN / 日期 DATE



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-8453R1      DATE 2009.11.07      PAGE 3 OF 3      Revision No: 0

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	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
	2R1	70				33								ACC.	100%
	3R1	70				33								ACC.	100%
	4R1	70				33								ACC.	100%
	5R1	70				33								ACC.	100%
SEG055A-014	1R1	70				33								ACC.	100%
	2R1	70				33								ACC.	100%
	3R1	70				33								ACC.	100%
	4R1	70				33								ACC.	100%
	5R1	70				33								ACC.	100%

AFTER B-WR7226-7232

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EXAMINED BY 主探 <i>Jim Fei</i> LEVEL - II SIGN / DATE <i>09.11.07</i>	REVIEWED BY 审核 <i>Ju wei</i> LEVEL - II SIGN / DATE <i>09.11.07</i>
质量经理 / QCM <i>Lu jian hua 09.11.07</i>	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-000424**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0394**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:** 26-Aug-2009**Description of Non-Conformance:**

This Quality Assurance Inspector (QA) observed that the contractor is deviating from the AWS D1.5 Code requirements for heat straightening. The contractor used an overhead crane to lift one end of a side panel while local heat was being applied. This method deviated from the ZPMC Heat Straightening Report (HSR1) #7439. The side panel in question is for OBG Segment 9DW (SEG 055A) with Side Panels designation SP772B, SP732B, SP494B, and SP672B. The weld being heated in the photograph below is weld number 013.

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

Perform NDT verification.

**Corrective action taken:**

ZPMC is providing the HSR1 to show the procedure used to heat straighten and NDT documentation showing that the welds affected are acceptable.

**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 Office of Structural Materials for your project.

**Inspected By:** Tsang, Eric

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer