

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-000620**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0593**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Open rib Stiffener on Edge Panel of 5AW to 5BW
Procedural	Procedural	Description:	

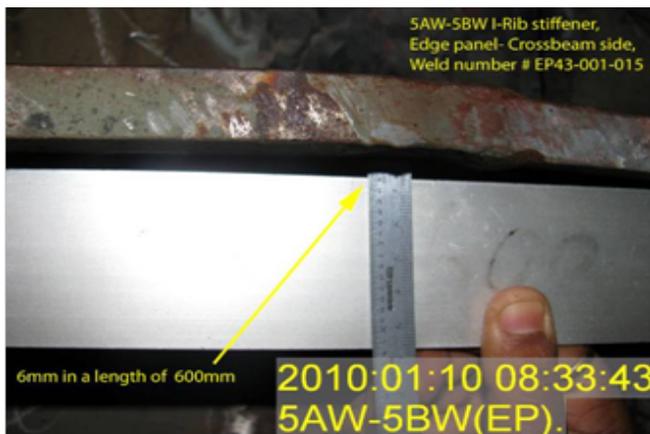
Reference Description: Straightness/flatness deviation outside of allowable tolerance noted at Open rib Stiffener to Open rib Stiffener joint (Edge Panel of 5AW to 5BW)

Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of I-Rib stiffener in the OBG Trial Assembly area, this QA inspector discovered the following issue:

- One I-Rib weld between the 5AW to 5BW (Edge panel-I-Rib stiffener) was misaligned across the weld joint.
- The Edge Panel (EP) I-Rib stiffener weld joint is identified as: EP043-001-015 (Cross beam side)
- This weld is complete joint penetration (CJP) butt weld.
- The material is designated as non Seismic Performance Critical Members (Non SPCM).
- The out of flatness measurement across the weld joint is 6mm over a length of 600mm, where the 600mm ruler is centered over the weld joint. The maximum allowable deviation per the Standard Specifications is 5mm.

-Per AASHTO Bridge Construction Specifications, the straightness of longitudinal stiffeners issue was observed. A maximum deviation of 8mm was measured over a length of 2500mm by placing a fully tensioned string line adjacent to both ends of the stiffener where the diaphragm/floorbeam intercepted the stiffener. The maximum allowable deviation for straightness is $L/480$ ($2500/480$) = 5.2mm



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



Applicable reference:

Standard Specification July 1999, Section 55-3.17: "The flat side of all butt welded joints shall not deviate from flatness by more than 5 mm in a length of 600 mm centered over the weld joint."

AASHTO Standard Specifications for Highway Bridges, Division II – Bridge Construction Specifications, Section 11.4.13.3:

The maximum deviation from detailed straightness or curvature in any direction perpendicular to its length of a longitudinal web stiffener or other stiffener subject to calculated compressive stress shall not exceed: $L/480$ Where L = the length of the stiffener or rib between cross members, webs, or flanges, in inches.

Special Provisions Section 10-1.59 Steel Structures, Shop Welding G item 2: Misalignment between discontinuous members shall not exceed 10% of the thickness of the thinner member or 3mm, whichever is less.

AWS D1.5 (02) Section 3.3.3: "Parts to be joined by groove welds shall be carefully aligned. Where the parts are effectively restrained against bending due to eccentricity in alignment, the offset from theoretical alignment shall not exceed 10 percent of the thickness of the thinner part joined, but in no case shall be more than 3 mm (1/8)."

Standard Specification July 1999, Section 55-3.09 Finished Members: Finish members shall be true to line and free from twists, bends and open joints.

Standard Specification July 1999, Section 55-3.01 Quality of Workmanship: Workmanship and finish shall be equal to the best general practice in modern bridge shops.

Who discovered the problem: M.Manikandan

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 1600 hours, 01-10-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 0900 hours, 01-11-10, Verbal

QC Inspector's Name: Kevin Chen

Was QC Inspector aware of the problem:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

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



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 **Date:** 11-Jan-2010
 375 BURMA ROAD
 OAKLAND CA 95607 **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:** 05.03.06-000583
Subject: NCR No. ZPMC-0593

Reference Description: Straightness/flatness deviation outside of allowable tolerance noted at Open rib Stiffener to Open rib Stiffener joint (Edge Panel of 5

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:** 05

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of I-Rib stiffener in the OBG Trial Assembly area, this QA inspector discovered the following issue:

- One I-Rib weld between the 5AW to 5BW (Edge panel-I-Rib stiffener) was misaligned across the weld joint.
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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: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0593

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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: 05.03.06-000583

Subject: NCR No. ZPMC-0593

Dated: 08-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000579 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: Dimensional acceptance will be available at the time of shipment after all parties are in agreement. ZPMC requests that this NCR be approved with actions pending.

As these are related to the final dimensions of the sub assembly and there is potential for distortion with ongoing work in trial assembly. Dimensional acceptance will be available at the time of shipment after all parties are in agreement. Until that those results are available, ZPMC requests that this NCR be approved with actions pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000579R00

Caltrans' comments:

Status: REJ

Date: 08-Feb-2010

No procedure was submitted to prevent future occurrences as requested, therefore this NPR is rejected.

Submitted by: Howe, Bill

Date: 08-Feb-2010

Attachment(s):

NCR PROPOSED RESOLUTION

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

Dated: 10-Feb-2010

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Document No.: ABF-NPR-000579 Rev: 01

Ref: 05.03.06-000583

Subject: NCR No. ZPMC-0593

Contractor's Proposed Resolution:

Reference Resolution: To close this NCR, once the distortion documented in this non conformance is corrected and the applicable documents that verify this are submitted ZPMC will request closure.

To close this NCR, once the distortion documented in this non conformance is corrected and the applicable documents that verify this are submitted ZPMC will request closure. Until they become available ZPMC requests that this proposal be accepted with action pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000579R01

Caltrans' comments:

Status: AAP

Date: 11-Feb-2010

AAP approved.

Submitted by: Howe, Bill

Date: 12-Feb-2010

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000583

Subject: NCR No. ZPMC-0593

Dated: 09-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000579 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the internal NCR that was written, as well as the weld repair report and NDT to show that weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has removed the weld and rewelded the splice to correct the misalignment. The work was verified by the Department and removed from the punchlist after complete. ZPMC is providing the internal NCR that was written, as well as the weld repair report and NDT to show that weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000579R02;

Caltrans' comments:

Status: CLO

Date: 18-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 18-Mar-2010

Attachment(s):



No. B-651

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-8

REGARDING: NCR-000620 (ZPMC-0593)

With this letter of response, ZPMC requests closure of CT NCR-000620 (ZPMC-0593) what mentioned about the unaccepted straightening of ribs .

- ZPMC acknowledged this problem and has issued internal NCR.
- To rectify the straightening or ribs, the splice weld was removed, repaired, retest and accepted.
- Punch list item 388 what mentioning about this NCR has been confirmed and closed by CT inspector.

Based on the taken actions and attached documentations, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000620 (ZPMC-0593)

NCR-B-391(ZPMC-0593)

B-WR10530

B787-UT-11482

A handwritten signature in black ink, appearing to be "Luy" followed by a stylized flourish.

3/8/10



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: 11-Jan-2010

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

Dear: Mr. Charles Kanapicki

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0593

Document No: 05.03.06-000583

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Material Location: OBG

Lift: 05

Remarks:

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- This weld is complete joint penetration (CJP) butt weld.
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Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0593

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

File: 05.03.06

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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-000620

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 10-Jan-2010

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

NCR #: ZPMC-0593

Type of problem:

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

Bridge No: 34-0006

Component: Open rib Stiffener on Edge Panel of 5AW to 5BW

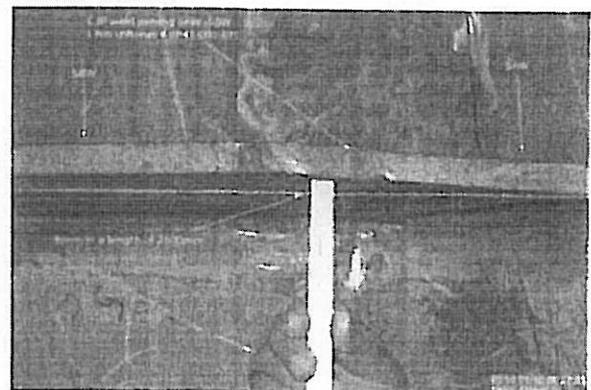
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



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Who discovered the problem: M.Manikandan

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 1600 hours, 01-10-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 0900 hours, 01-11-10, Verbal

QC Inspector's Name: Kevin Chen

Was QC Inspector aware of the problem:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

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



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-391(ZPMC-0593)
Item: Unacceptable straightening 名称描述: 直线度超标	Item Number: 件号: 5AW+5BW	Drawing: 图号: EP043
Location: Trial assembly 5W 位置: 后场总拼 5W		Date: 日期: 2010-01-18

Description of Nonconformance:

During the CT random in-process visual inspection of I-Rib stiffener in the OBG trial assembly area, this CT inspector discovered the following issue:

-One I-Rib weld between 5AW to 5BW (Edge panel I-Rib stiffener) was misaligned across the weld joint.

-The Edge Plate I-Rib stiffener weld joint is identified as: EP043-001-015(CB SIDE)

-This weld is CJP butt weld.

-The material is designated as non SPCM.

-The out of flatness measurement across the weld joint is 6mm over a length of 600mm, where the 600mm ruler is centered over the weld joint. The maximum allowable deviation per the Standard Specification is 5mm.

-Per AASHTO Bridge Construction Specifications, the straightness of longitudinal stiffener issue was observed. A maximum deviation of 8mm was measured over a length of 2500mm by placing a fully tensioned string line adjacent to both ends of the stiffener where the diaphragm/floorbeam intercepted the stiffener. The maximum allowable deviation for straightness is $L/480$ ($2500/480$)=5.2mm.

在对 OBG 拼装位置进行过程中的随机检查中发现如下情况:

-5AW+5BW 位置一处 I 肋 (腹板位置) 对接存在错位;

-该焊缝为 CJP 焊缝;

-母材为非 SPCM;

-平整度误差为使用 600mm 靠尺测得 6mm, 标准要求为 5mm;

-根据 AASHTO 标准, 针对纵向筋板直线度的要求。在二档隔板间使用 2500mm 长的粉线测得 8mm 变形量。最大允许量应该为 $L/480=5.2mm$ 。

Work By:

施工方: Xi'q Fa Ling 2.2

Prepared by:

准备:

Reviewed by QCE:

质量工程师批准:

Drawing Error

图纸错误

Material Defect

材料缺陷

Fabrication Error

制作错误

Other

其他原因

Disposition:

处理措施:

Use as is

回用

Repair

返修

Reject

拒收

Recommendation:

建议: 请质检人员对接板根部进行测量, 提供数据给工艺

Measure stiffener root data for technologist.

Prepared by:

准备

陶磊 1/18/10

Approved by QCA:

质量经理批准

陆建华 1/18/10

Reason for Nonconformance:

不符合原因:

由于 5AW+5BW 位置一处 I 肋力 腹板位置
对接存在错位。

I rib at edge plate butt was misalignment at
5AW and 5BW position.

Prevention of Re-occurrence:

预防措施:

加强现场监督和检查。

Enhance supervision and inspection on-site.

Approved by/批准: Gao Jun 2.2

Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据:

附件

无附件

Reviewed /批准: _____

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____

汪华明

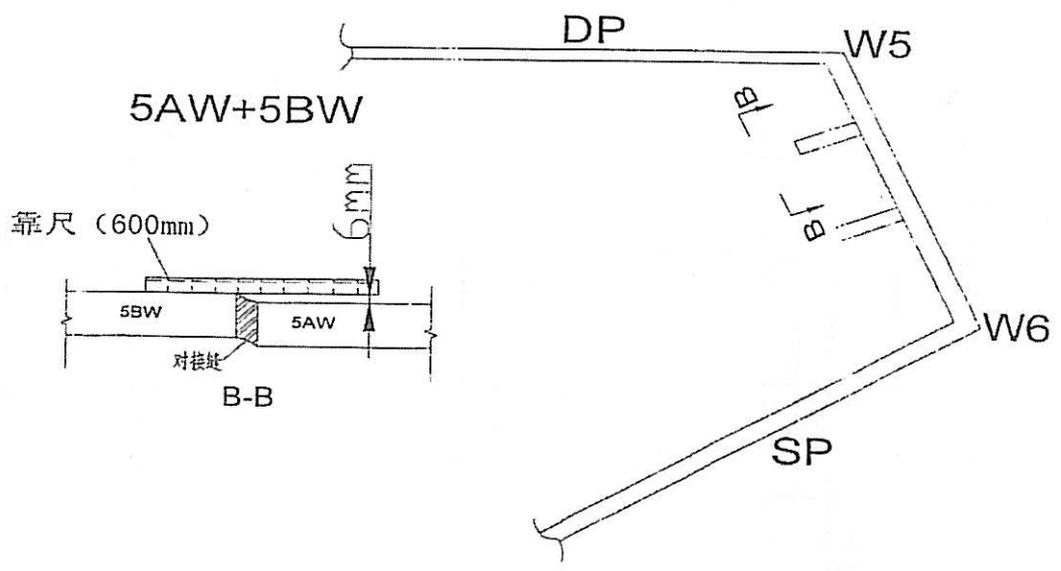
	<h2 style="margin: 0;">焊缝返修报告</h2> <h3 style="margin: 0;">Welding Repair Report</h3>	版本 Rev. No. <div style="font-size: 2em; font-weight: bold; margin: 5px 0;">0</div>
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项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG21 SEG23	报告编号 Report No.	B-WR10530
合同号 Contract No.:	04-0120F4	部件名称 Items Name	I肋	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:
Description of welding discontinuity:
 经检测发现: 5AW+5BW (焊后) 靠联系梁侧斜腹板上有一处I肋对接存在错边。详见如图所示:
 It was found that one "I" rib on the web plate next to the connection plate in Segment 5AW+5BW was misaligned after welding. Please see the details in the following sketch.

检验员 (Inspector): Song Hui 日期(Date): 2010-1-27

焊缝返修位置示意图:
Draft of welding discontinuity:



产生原因:

Caused:

焊接变形及制作误差。

Welding distortion and fabrication error.

车间负责人(Foreman): *Lih. Jang* 日期(Date): *1.29*

处理意见 ;

Disposition :

1. 采用打磨或碳刨的方法去除对接端口处I肋与腹板之间部份长度焊缝, 去除焊缝长度根据实际情况定。同时用切割的方法去除I肋的对接焊缝。碳刨前根据相应WPS预热;
 2. 采用外力调整对接端口I肋斜势不大于1: 10, 对接错边量在公差范围内。
 3. 根据相应返修WPS准备焊接接头;
 4. 根据相应WPS预热及返修;
 5. 将返修处焊缝打磨与周边焊缝平齐;
 6. 根据图纸要求进行检测。
-
1. Remove the welds between I-Ribs and the edge plate at the splice by grinding or gouging. The length of removed weld will be decided according to actual situation. Meanwhile, remove the butt weld between I-Ribs by cutting. Preheat according to the WPS prior to gouging.
 2. Adjust the misalignment of I-Ribs to meet the tolerance. The transition is not more than 1:10.
 3. Prepare the excavation according to the relevant WPS.
 4. Preheat and weld according to the WPS.
 5. Grind the weld flush to the adjacent weld or base metal.
 6. Check the weld according to the shop drawings.

工艺: *Hexiaolin*
Technical engineer

审核:
Approved by

日期
Date

10.1.29



焊缝返修报告

Welding Repair Report

版本 Rev. No.
0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	SEG21 SEG23	报告编号 Report No.	B-WR10530
合同号 Contract No.:	04-0120F4	部件名称 Items Name	I肋	NDT报告编号 Report No. of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:
Correction action to prevent re occurrence:
严格控制尺寸, 降低焊接变形。
Control the dimensions to avoid welding distortion.

车间负责人(Foreman): *Li Zhigang* 日期(Date): 1.29

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-SMAW-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1 WPS-345-SMAW-4 G(4F)-Repair WPS-345-SMAW-2 G(2F)-FCM-Repair WPS-345-FCAW-2 G(2F)-FCM-Repair WPS-345-SMAW-4 G(4F)-FCM-Repair	工艺员 technologist	<i>Mexiaolin</i> <i>(1.29)</i>
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返修(碳刨)前预热温度 Preheat temperature before gouging	65°C	返修的缺陷 Description of discontinuity	开刀(焊接缺陷)
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	172°C
最大碳刨深度 Max. depth of gouging	NA	碳刨总长 Total length of gouging	500mm

焊工 welder	054467	焊接类型 welding type	GMAW	焊接位置 position	1G/4G/2F/4F
焊接电流 Current	142 153	焊接电压 Voltage	22.3 23	焊接速度 Speed	99 102

返修后检查
Inspection After repairing:

外观检查 VT result	检验员 Inspector	日期 Date	
NDT复检 NDT result	探伤员 NDT person	日期 Date	

Acc *Wu zhi cheng* 2010.2.27
MJ Acc *Jing jiao Ding Aichang* 2010.05.04
Acc *Tangy Xing shen* 2010.03.07

见证:
Witness/Review:

备注:
Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-11482 DATE 2010.03.07 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: CORNER ASSEMBLY DRAWING NO.: OBW5 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
 SMAW BUTT Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345 18mm

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		
EP043-001-015		70				32								ACC.	100%

AFTER B-WR10530

BLANK

EXAMINED BY 主探 Tany Jimmy shan 2010.03.07 REVIEWED BY 审核 XV Rong gang 2010.03.07
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM 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-000554**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0593**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 10-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of I-Rib stiffener in the OBG Trial Assembly area, this QA inspector discovered the following issue:

- One I-Rib weld between the 5AW to 5BW (Edge panel-I-Rib stiffener) was misaligned across the weld joint.
- The Edge Panel (EP) I-Rib stiffener weld joint is identified as: EP043-001-015 (Cross beam side)
- This weld is complete joint penetration (CJP) butt weld.
- The material is designated as non Seismic Performance Critical Members (Non SPCM).
- The out of flatness measurement across the weld joint is 6mm over a length of 600mm, where the 600mm ruler is centered over the weld joint. The maximum allowable deviation per the Standard Specifications is 5mm.
- Per AASHTO Bridge Construction Specifications, the straightness of longitudinal stiffeners issue was observed. A maximum deviation of 8mm was measured over a length of 2500mm by placing a fully tensioned string line adjacent to both ends of the stiffener where the diaphragm/floorbeam intercepted the stiffener. The maximum allowable deviation for straightness is $L/480$ ($2500/480$) = 5.2mm

Contractor's proposal to correct the problem:

Remove weld, correct dimensional tolerance issue, reweld and perform NDT required to verify weld quality.

Corrective action taken:

Contract submitted WRR used to perform repairs along with subsequent NDT documentation verifying weld is in conformance with Contract specifications. This item was found acceptable and signed off the Voyage 2 Punchlist on 02-22-2010. An internal NCR was issued by the Contractor in regards to this issue.

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

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

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 Jim Simonis 152. 1675.3703, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer
