

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-000502**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0475**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment 6AW
Procedural	Procedural	Description:	

Reference Description: ZPMC moved segment 6AW to the Blast Shop prior to completion and obtaining the "QA Approval Form" per CCO77

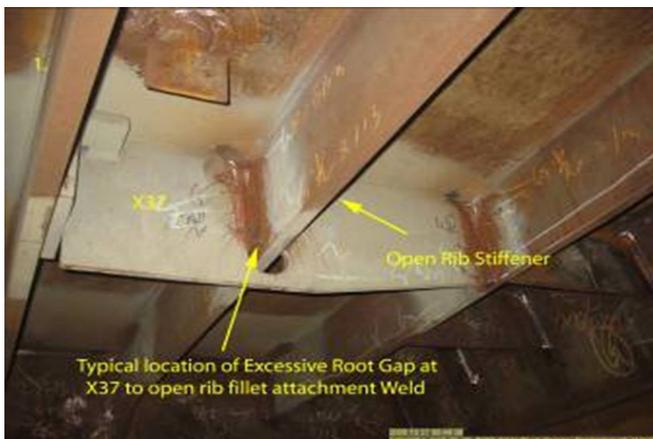
Description of Non-Conformance:

The Caltrans Quality Assurance (QA) Inspector arrived onsite at the ZPMC fabrication facility at 0700 on October 26th, 2009 and observed that the OBG segment 6AW had been moved to the blast shop for blast and paint prior to the completion of the following fabrication and obtaining the "QA Approval Form" per CCO77.

1. The transverse X37 Deck Brackets in this segment require a fillet weld per approved drawings with the maximum root opening not to exceed 5mm as allowed by AWS D1.5-2002 Section 3.3.1. The termination of these fillet welds at the following locations show a root gap greater than that allowed by the code:
X37 Brackets at Location W2 at panel points 37.25, 37.75, 38.25, 38.75, 39.25, 39.75, 40.25, and 40.75.
X37 Brackets at Location W5 at panel points 37.25, 37.75, 38.25, and 38.75.
2. The FL2-1, FL1 and FL3 Floor Beam sub-assemblies were found distorted on the upper Flange Plate after the adjacent Deck Panel Diaphragm weld connecting to this upper Flange Plate was changed from a fillet weld to a complete joint penetration (CJP) due to fit up issues. The maximum distortion (tilt) of the flange from its original flat position is 23mm.
3. Welds connecting the Floor Beam Web Plate to the Bottom and Side Plates have fillet welds wrapped on both ends of the cut out for T-Rib stiffeners. The weld detail on drawing shows the fillet weld is to be welded both sides and not welded all around (wrapped). Furthermore, RFI 1786 clarified that contractor shall "terminate welds in accordance with the contract plans and the approved shop drawings."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



Applicable reference:

1. AWS D1.5/2002 Section 3.3.1- "The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm [3/16 in.] except in cases involving either shapes or plates 75 mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance. In such cases, a maximum root opening of 8mm may be used, with a backing weld or suitable backing. If the root opening is greater than 2 mm, the leg of the fillet weld shall be increased by the amount of the root opening or the Contractor shall demonstrate that the required weld size has been obtained."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

2. Standard Specifications July 1999, Section 55-3.01: Workmanship and finish shall be equal to the best general practice in modern bridge shops.
3. AWS D1.5/2002 Section 3.4.1; In assembling and joining parts of a structure or of built-up members and in welding reinforcing parts to members, the procedure and sequence shall minimize distortion and shrinkage.
4. Standard Specifications July 1999, Section 55-3.09: Finish members shall be true to line and free from twists, bends and open joints.
5. Segment Assembly Drawings SEGSD9/9A, SEGSD10/10A, SEGSD11/11A, SEGSD12/12B - Joint design on drawing calls for a 6-8mm fillet weld, welded on both sides not wrapped and RFI 1786.
6. Contract Change Order CCO77, Section 3.3.i) "The QA approval form shall be issued for the following subassemblies: Segment assembly before painting and lift assembly."

Who discovered the problem: Rodney Patterson

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1200 hours, Verbal

QC Inspector's Name: Zhang Wei

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: Carreon,Albert

Lead Reviewer/Task Leader

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
375 BURMA ROAD
OAKLAND CA 95607

Date: 11-Dec-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: 05.03.06-000465

Subject: NCR No. ZPMC-0475

Reference Description: ZPMC moved segment 6AW to the Blast Shop prior to completion and obtaining the "QA Approval Form" per CCO77

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:** 06

Remarks:

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Action Required and/or Action Taken:

1. Make sure to submit the "QA Approval Form" per CCO77.
2. Submit repair request to use CJP weld in lieu of fillet weld.
3. Submit a repair plan to the engineer for approval.

NCT

(Continued Page 2 of 2)

Transmitted by: Bill Howe

Attachments: ZPMC-0475

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: 05.03.06-000465

Subject: NCR No. ZPMC-0475

Dated: 08-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000574 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: Once the QA approval forms are signed after trial assembly is complete, ZPMC will provide them to close this NCR. Once the QA approval forms are signed after trial assembly is complete, ZPMC will provide them to close this NCR. Since it is clear that the documents required to close this NCR will not be available until that time, ZPMC request that this proposal be accepted with action pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000574R00

Caltrans' comments:

Status: REJ

Date: 08-Feb-2010

Trial assembly should not preclude submitting the documents as requested. This NPR is rejected.

Submitted by: Howe, Bill

Attachment(s):

Date: 08-Feb-2010

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-000574 **Rev:** 01

Ref: 05.03.06-000465

Subject: NCR No. ZPMC-0475

Contractor's Proposed Resolution:

Reference Resolution: Until the remaining tags are signed, ZPMC requests that this proposal be accepted with actions pending.

To close this NCR, when ZPMC, ABFJV, and Caltrans agree that the non conformances documented have been corrected and the material is in conformance ZPMC will request the green tags not yet signed for this segment be signed by all three parties. Until the remaining tags are signed, ZPMC requests that this proposal be accepted with actions pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000574R01

Caltrans' comments:

Status: AAP

Date: 11-Feb-2010

AAP approved.

Submitted by: Howe, Bill

Date: 11-Feb-2010

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000465

Subject: NCR No. ZPMC-0475

Dated: 09-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000574 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has rectified the issues listed in non conformance report and is providing documents to show that root gap, distortion and wrap around welds have been corrected or accepted.

ZPMC has rectified the issues listed in non conformance report and is providing documents to show that root gap, distortion and wrap around welds have been corrected or accepted. The QA Approval form will be signed after closure of this NCR. Based on the documents provided ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000574R02;

Caltrans' comments:

Status: CLO

Date: 17-Mar-2010

The information to close this received for this NCR is sufficient NCR. It should be noted that this 6AW segment has had numerous issues with respect to heat straightening, and floor beam flatness that remain open.

Submitted by: Howe, Bill

Date: 17-Mar-2010

Attachment(s):



No. B-652

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-8

REGARDING: NCR-000502 (ZPMC-0475)

With this letter of response, ZPMC requests closure of CT NCR-000502 (ZPMC-0475) what mentioned about several issues on 6AW.

- ZPMC acknowledged these problems and has issued internal NCR.
- Part 1. Building up was performed to X37s to rectify the root opening. Please see attached B-WR5177. MT & UT were performed to warrant the quality of base metal repair area. MT was performed and accepted after X37s were welded in CA by both ZPMC & CT.
- Part 2. Heat straightening was performed to adjust the dimension of Floor Beam. Attached check report shows the dimension is acceptable after heat straightening.
- Part 3. The wrap-around fillets have been inspected by CT inspector and accepted.
- Please been noticed the "QA Approval Form" will be achieved after the above issues be approved.

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

ATTACHMENT:

NCR-000502 (ZPMC-0475)

NCR-B-324(ZPMC-0475)

B-WR5177

B787-UT-11273

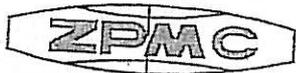
B787-MT-19544

HSR1(B)-7886

DIMENSION CHECK REPORT AFTER HS

A handwritten signature in black ink, appearing to be "Jing Wu", is written over the printed text.

3/8/10



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-324(ZPMC-0475)

Item: move 6AW to the blasting shop
 prior to completion
 名称描述: 报验没有完成前将 6AW 移至冲砂车间
 Item Number:
 件号: 6AW
 Drawing:
 图号: N/A

Location: outside yard
 位置: 外场
 Date:
 日期: 2009-12-22

Description of Nonconformance:

不符合项状态描述:

The Caltrans Quality Assurance (QA) Inspector arrived onsite at the ZPMC fabrication facility at 0700 on October 26th, 2009 and observed that the OBG segment 6AW had been moved to the blast shop for blast and paint prior to the completion of the following fabrication and obtaining the "QA Approval Form" per CCO77.

- The transverse X37 Deck Brackets in this segment require a fillet weld per approved drawings with the maximum root opening not to exceed 5mm as allowed by AWS D1.5-2002 Section 3.3.1. The termination of these fillet welds at the following locations show a root gap greater than that allowed by the code: X37 Brackets at Location W2 at panel points 37.25, 37.75, 38.25, 38.75, 39.25, 39.75, 40.25, and 40.75. X37 Brackets at Location W5 at panel points 37.25, 37.75, 38.25, and 38.75.
- The FL2-1, FL1 and FL3 Floor Beam sub-assemblies were found distorted on the upper Flange Plate after the adjacent Deck Panel Diaphragm weld connecting to this upper Flange Plate was changed from a fillet weld to a complete joint penetration (CJP) due to fit up issues. The maximum distortion (tilt) of the flange from its original flat position is 23mm.
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加州检验员在 2009 年 10 月 26 日发现 6AW 在没有完成报验之前移至冲砂车间进行打砂和涂装。

- 横向 X37 顶部支撑按照图纸是角焊缝, 根据 AWS D1.5-2002 3.3.1 要求最大间隙不能超过 5mm。但是这些角焊缝都大于 5mm, 这些角焊缝位置是: X37 支撑位于 W2 在 PP37.25, 37.75, 38.25, 38.75, 39.25, 39.75, 40.25 和 40.75。X37 支撑位于 W5 在 PP 37.25, 37.75, 38.25 和 38.75。
- FL2-1, FL1 和 FL3 隔板在发现在烧焊与顶板连接板连接后, 角焊缝改 CJP 焊缝的位置, 顶板连接板倾斜度最大位置达到 23mm
- 连接箱梁底板和斜底板的焊缝在两端头切除 T 肋筋板处包角。这些焊缝按照图纸要求只要烧焊两边而不需要包角。另外, RFI1786 明确指出施工队需要停止烧焊并且要与合同以及图纸要求施工。

Work By: [Signature]
 施工方: [Signature]

Prepared by: Zhangwei
 准备: 2009.12.22

Reviewed by QCE: [Signature]
 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: Use as is 回用
 Repair 返修
 Reject 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:

未按图纸要求施工

Didn't perform according to drawing requirement.

Prevention of Re-occurrence:

预防措施:

1. 在施工过程中严格按照图纸要求施工.

2. 加强对施工人员的培训, 做好现场指导.

1. perform fabrication according to drawing requirement

2. Enhance training worker and guiding on-site

Approved by/批准: _____

Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据:

①. 37 装面间隙超标, 见焊缝返修报告 WJR-5177, ^{附件} 无附件

②. 6AW 隔板翼缘板变形见校核记录 HSR(CB)-7886.

③ 对 T 肋位置焊缝包有的, 根据图纸要求检测不包含的, 需打磨去除

Reviewed /批准: Muileji 1.20/10

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

已按照返修报告处理

Verified by QCI/质检确认: Zhu zhonghai 07.07.201

Reviewed by QCA/质检主任审核: _____

2010.07.06



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-Dec-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: 05.03.06-000465

Subject: NCR No. ZPMC-0475

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- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG

Lift: 06

Remarks:

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Action Required and/or Action Taken:

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

File: 05.03.06

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-000502**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0475**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG Segment 6AWProcedural Procedural Description:

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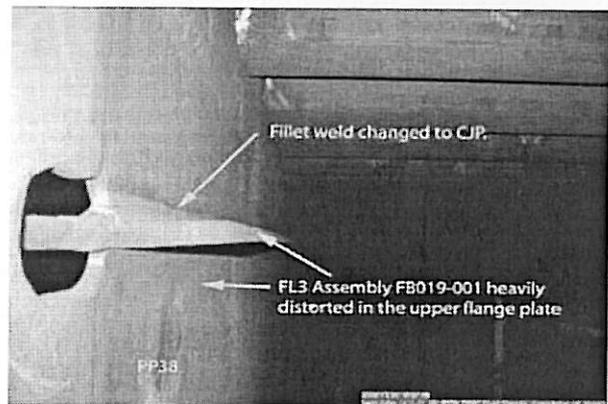
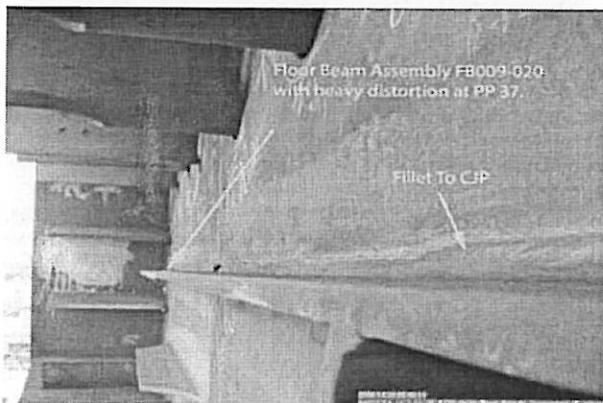
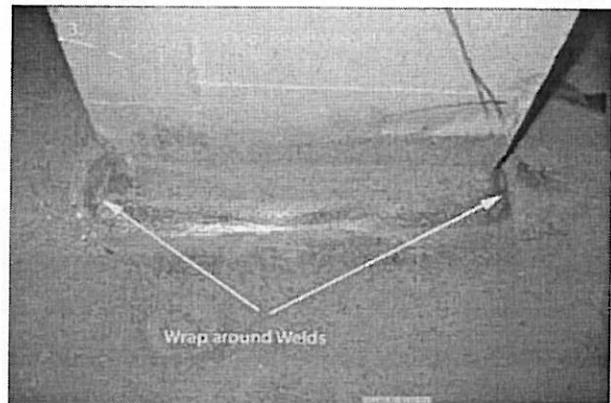
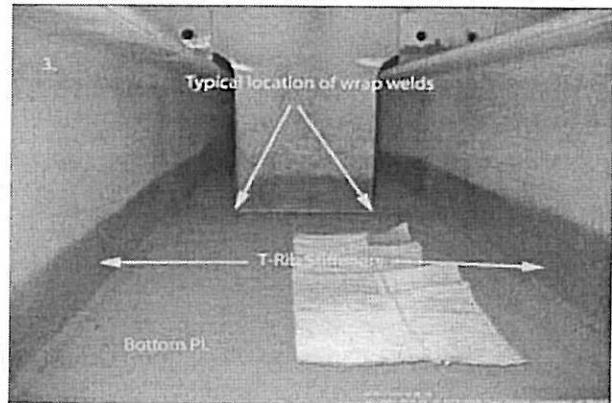
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

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Who discovered the problem: Rodney Patterson

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1200 hours, Verbal

QC Inspector's Name: Zhang Wei

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: Carreon, Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh, Mazen

SMR

zpmc-0475



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	X37	报告编号 Report No.	B-WR5177
合同号 Contract No.:	04-0120F4	部件名称 Items Name	角单元筋板 Corner assembly stiffener	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:

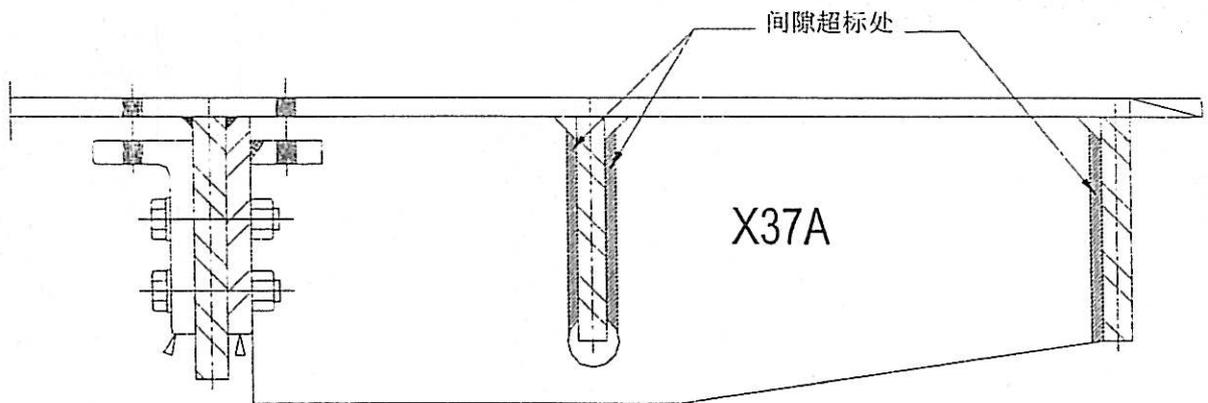
经检查发现箱梁6AW角单元内件X37A与顶板I肋装配间隙超标, 最大为6.4mm (工艺要求最大间隙不超过5mm), 涉及焊缝为: CA025-025~030\037~042\049~054\061~066\073~078\085~090\101~106\113~118, SEG027J-139\140\143~146\127~132\007\008\011~014.

After inspection box 6AW assembly inner X37A and deck plate I-rib, the gap was maximum 6.4mm, which shall be 5mm, weld ID: CA025-025~030\037~042\049~054\061~066\073~078\085~090\101~106\113~118, SEG027J-139\140\143~146\127~132\007\008\011~014.

检验员 (Inspector): Li Yanhua 日期(Date): 09.06.03

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

焊接变形和制作误差。

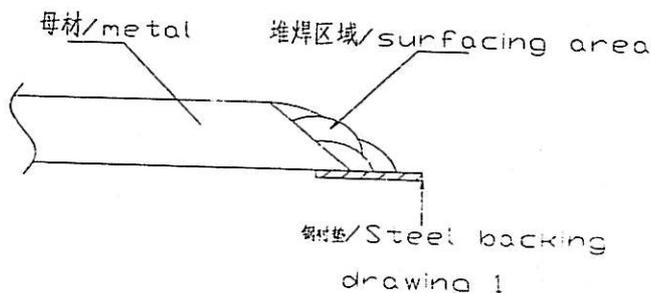
Weld distortion and fabricate error.

车间负责人(Foreman): *Li Zhigang* 日期(Date): 09.6.3.

处理意见

Disposition :

1. 按照图纸要求对件X37A进行堆焊处理;
2. 将要修补的区域打磨光滑;
3. 准备一个正确的接头形式, 具体参见返修的WPS;
4. 做100%VT和100%MT, 并按照图一所示加钢衬垫, 具体参见AWS D1.5.3.13;
5. 根据返修的焊接返修工艺规程(WPS)进行预热及焊接;
6. 焊后去除钢衬垫, 将焊缝打磨至与母材平齐;
7. 根据图纸要求进行相应的NDT(VT、MT和UT)检测;



1. Perform surfacing to item X37A per work drawing;
2. Grind the edge of the repair area cleanly;
3. Prepare an right joint according to the approved WPS;
4. Perform 100%VT and 100%MT, and add steel backing according to the attached drawing 1 and AWS D1.5.3.13;
5. Preheat and weld according to the relevant WPS;
6. Gouge off the steel backing and grind the weld flush with base metal after welding;
7. Perform NDT inspection(VT、MT and UT) of the weld according to the working drawings.

工艺: *hexiaolin*
Technical engineer

09.06.03

审核:
Approved by

Luyuanhua

日期
Date

06/03/09



焊缝返修报告

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纠正措施:
Correction action to prevent re occurrence:
 加强焊接过程中的监控, 减少误差。
Enhance supervision in process of welding to reduce error.

车间负责人(Foreman): *Li Zhigang* 日期(Date): *6-3*

返修后检查
Inspection After repairing:

见证:
 Witness/Review:

备注:
 Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-11273 DATE 2009.06.28 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: CORNER ASSEMBLY DRAWING NO.: X37A 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. 28ST, 2008

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-345T2-X 16mm

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		
X37A		70				32								ACC.	100%
X37A		70				32								ACC.	100%

BASE METAL PER B-WR5177

BLANK

EXAMINED BY 主探 Jin Feng REVIEWED BY 审核 Huang Jin
 LEVEL - II SIGN / DATE 09.06.28 LEVEL - II SIGN / DATE 09.6.28

质量经理 / QCM Wang 6/28/09 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-19544 DATE日期 2009.06.12 PAGE OF页码 1/1 Revision No: 0

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

DRAWING NO. CORNER ASSEMBLY CALTRANS CONTRACT NO.: 04-0120F4
 图号: 6AW 加州工程编号

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 ST , 2009
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EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
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MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
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PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
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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 16mm
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WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	NA
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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			
X37A				ACC.		100%MT
X37A				ACC.		100%MT

BASE METAL PER B-WR5177

BLANK

EXAMINED BY 主探 <i>Ding Aicheng</i>	REVIEWED BY 审核 <i>Sun Gongchang</i>
---------------------------------------	--

LEVEL - II SIGN 签名 / DATE 日期 <i>09.6.12</i>	LEVEL-II SIGN / DATE 日期 <i>2009.06.12</i>
--	--

质量经理 / QCM <i>Liu Jun</i>	用户 CUSTOMER
签字 SIGN / 日期 DATE <i>6/12/09</i>	签字 SIGN / 日期 DATE

27MC-0475

VT-49848~49849,

7



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record #

HSR1(B)-7886

版本号 Revision #

0

日期 Date

2009.11.12

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:	
梁段 Gird: 6AW	质检经理/Quality Assurance Manager~Approval <i>Lujiambao</i>
塔段 Tower: N/A	
焊缝号 Weld No: See Sketch	
焊缝地图号 Weld Map No: N/A	

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): natural gas 天然气

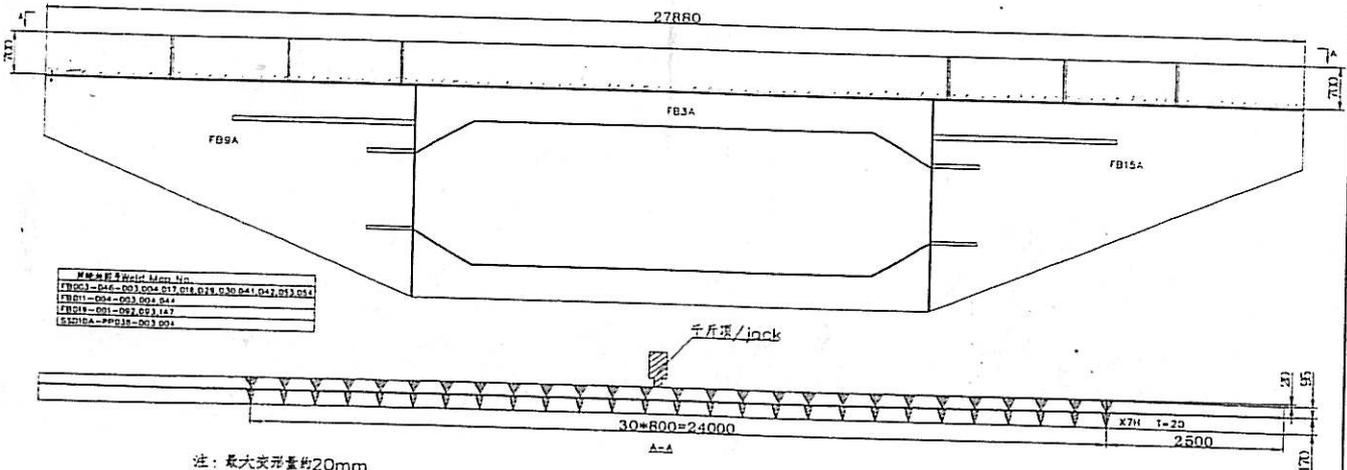
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测。

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): <650°C

简图 Sketch



注: 最大变形量约20mm
 NOTE: the max deformation is about 20mm

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

检验员 Inspector: <i>Li Yan Hua</i>	签字 Signature: <i>李燕华</i>
CWI # 9720701	Closing Date: 2010.1.18
II 级探伤 NDE Certification: Level II	
质检经理 QC Manager <i>Lujiambao</i>	审核日期 Review Date: 1/18/10

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 *Lujiambao*

11.12

美国钢桥钢板平整度火工校正检查记录卡

The report of steel plate heat straightening process checking



工程编号: The serial no. of project:	ZP06-787	构件名称 The part name:	桥面板
材质: Material:	A709M-345F-X	火工校正次数 The times of heat straightening:	1
移植是否准确: Material mark checking:	正确	桥段名称 Section name:	6Aw
图号: The drawing no.:	SE627		
炉批号: The heatho of plate:	N/A		
钢板编号: Plate ID:	N/A		

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

检查时间 Checking time:	10:40	11:00							
测量温度 Measure result:	480°C	502°C							

校火前平整度测量 Flatness checking before heat straightening (mm)

测量点 Measure position:	A	B	C						
测量值 Measure result:	14	20	10						

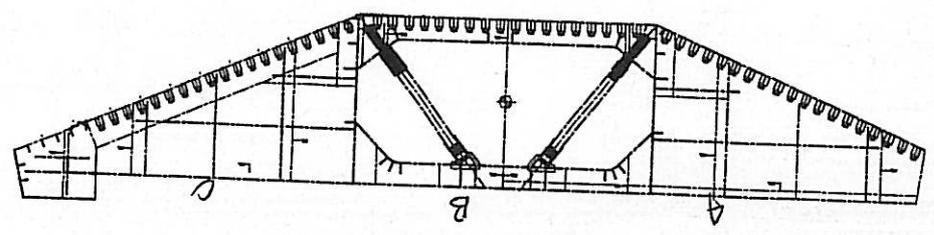
校火后平整度测量 Flatness checking after heat straightening (mm)

测量点 Measure position:	A	B	C						
测量值 Measure result:	1	2	1						

整体平整度/筋板垂直度是否合格
Heat straightening result: A/C

若校正影响焊缝,请填写以下项目
Fill the following items if the straightening affects the weld

对应NDT报告编号 NDT report no.	UT A/C	MT A/C	RT	NDT检验员签字 NDT inspector:	张强 Zhang Qiang	日期 Date:	2009.11.15



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-000568**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 29-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0475**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: 27-Oct-2009**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector arrived onsite at the ZPMC fabrication facility at 0700 on October 26th, 2009 and observed that the OBG segment 6AW had been moved to the blast shop for blast and paint prior to the completion of the following fabrication and obtaining the "QA Approval Form" per CCO77.

1. The transverse X37 Deck Brackets in this segment require a fillet weld per approved drawings with the maximum root opening not to exceed 5mm as allowed by AWS D1.5-2002 Section 3.3.1. The termination of these fillet welds at the following locations show a root gap greater than that allowed by the code:

X37 Brackets at Location W2 at panel points 37.25, 37.75, 38.25, 38.75, 39.25, 39.75, 40.25, and 40.75.

X37 Brackets at Location W5 at panel points 37.25, 37.75, 38.25, and 38.75.

2. The FL2-1, FL1 and FL3 Floor Beam sub-assemblies were found distorted on the upper Flange Plate after the adjacent Deck Panel Diaphragm weld connecting to this upper Flange Plate was changed from a fillet weld to a complete joint penetration (CJP) due to fit up issues. The maximum distortion (tilt) of the flange from its original flat position is 23mm.

3. Welds connecting the Floor Beam Web Plate to the Bottom and Side Plates have fillet welds wrapped on both ends of the cut out for T-Rib stiffeners. The weld detail on drawing shows the fillet weld is to be welded both sides and not welded all around (wrapped). Furthermore, RFI 1786 clarified that contractor shall "terminate welds in accordance with the contract plans and the approved shop drawings."

Contractor's proposal to correct the problem:

Address distortion issues by heat straightening, remove X37 brackets and butter ends to correct excessive root opening.

Corrective action taken:

Contractor has performed heat straightening at said location, and flange is now in conformance with Contract specifications. X37 brackets were removed and excessive root openings were repaired via buttering.

