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 **Report No:** NCR-000368
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 19-Jun-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0342

Type of problem:

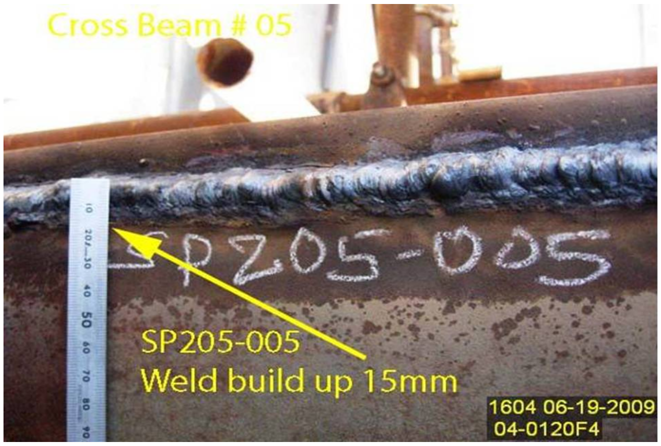
Welding	☑	**Concrete**	☐	**Other**	☐
Welding	☐	**Curing**	☐	**Procedural**	☐
Joint fit-up	☐	**Coating**	☐	**Other**	☐
Procedural	☑	**Procedural**	☐	**Description:**	

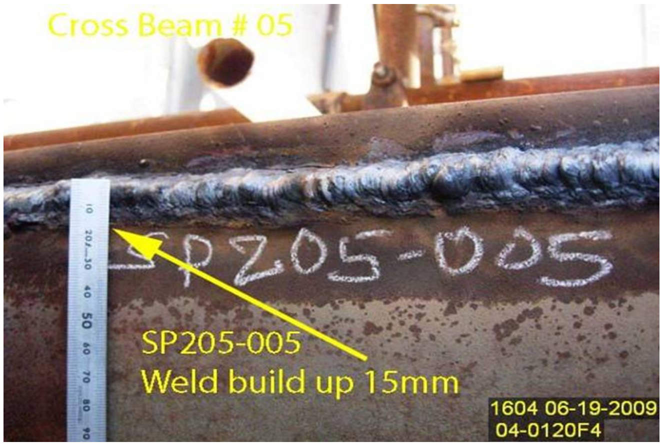
Bridge No: 34-0006
Component: Crossbeam #5

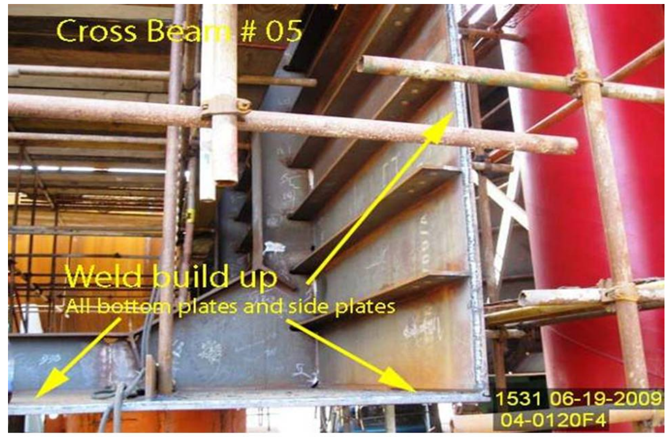
Reference Description: Buttering of FB and SP of CB 5

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material. See attached photos:







Applicable reference:

AWS D1.5 2002, Section 12.17.2 (7) ‘Noncritical Repair Welds’: “ Noncritical repair welds are generally welds to deposit additional weld beads or layers to compensate for insufficient weld size and to fill limited excavations to remove unacceptable edge or surface discontinuities, rollover, or undercut, including:.. (7) Deposition of weld metal up to 10 mm (3/8 inch) deep, or 1/4 the base-metal thickness, whichever is less, to correct for length or joint geometry.”

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Li xiu hua

Time and method of notification: 1600 / Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1600 / Verbal

QC Inspector's Name: Liu Wei Wei

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	**Date:**	04-Aug-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:**	05.03.06-000321
Subject:	NCR No. ZPMC-0342		

Reference Description: Buttering of FB and SP of CB 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: Xbeam **Lift:**

Remarks:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material.

See attached NCR No. ZPMC-0342 for details.

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 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0342

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

File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV

P.O. BOX 23223 Oakland, CA 94623

Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

To:	CALTRANS - SAS Superstructure 333 Burma Road Oakland CA 94607		**Dated:**	**24-Aug-2009**	
Attention:	Pursell, Gary Resident Engineer		**Contract No.:**	04-0120F4 04-SF-80-13.2 / 13.9	
Ref:	05.03.06-000321		**Job Name:**	SAS Superstructure	
Subject:	NCR No. ZPMC-0342		**Document No.:**	**ABF-NPR-000338 Rev: 00**	

Contractor's Proposed Resolution:

Reference Resolution: ZPMC performed this repair without engineers approval. ABF has notified the ZPMC QA department who in turn have instructed the welders on site.

ZPMC performed this repair without engineers approval. ABF has notified the ZPMC QA department who in turn have instructed the welders on site. ZPMC will submit the required documents at a later date for closure of this NCR

Submitted by:

Attachment(s): ABF-NPR-000338R00

Caltrans' comments:

Status: AAP

Date: 28-Aug-2009

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0342 at that time.

Submitted by: Wright, Doug **Date:** 28-Aug-2009

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000321

Subject: NCR No. ZPMC-0342

Dated: **08-Dec-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000338 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: Attached is documentation of the weld repairs and the NDT showing the weld is acceptable. Based on this ZPMC is requests closure of this NCR.

Attached is documentation of the weld repairs and the NDT showing the weld is acceptable. Based on this ZPMC is requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000338R01;

Caltrans' comments:

Status: AAP

Date: 13-Dec-2009

The NDT and weld repair documentation submitted has been reviewed by the Engineer. The MT report submitted did not indicate acceptance or rejection of the testing done. Please complete the report and re-submit for Engineer's review.

Submitted by: Chao, Ching

Date: 13-Dec-2009

Attachment(s):

ZPMC

No. B-522

LETTER OF RESPONSE

TO: American Bridge/Flour
DATE: 2009-12-08
REGARDING: NCR-000368(ZPMC-0342)

With this letter of response, ZPMC requests closure for CALTRANS NCR-000368(ZPMC-0342), what mentioned that QA observed buttering of FB and SP of CB5 without approved CWR.
Before these repair working, ZPMC has got an approved B-CWR598.
So ZPMC provide internal NCR, CWR and NDT documentation, hoping CALTRANS could take a review and consider close this NCR.

ATTACHMENT:
NCR-B-237
NCR-000368(ZPMC-0342)
B-CWR598
B787-UT-7871
B787-MT-12719

12/08/09

ZPMC

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-237(ZPMC-0342)

Item: Buttering of FB and SP of CB 5
名称描述: 顶板乱堆放

Item Number:
件号: N/A

Drawing:
图号: CB5

Location:
位置:

Date:
日期: 2009-08-18

Description of Nonconformance:
不符合项状态描述:

Caltrans Quality Inspector observed ZPMC personal performing buttering on both the SPCM and non SPCM portions of CB5 without an approved Critical Welding Repair ,The members can be identified as the side plates and bottom plate for the crossbeam(reference drawings CB202C,CB202D,&CB202F).

Buttering was performed to correct dimensional issues with the member ,and has been performed throughout the entire length of the bottom plate and both side plates, The amount of weld material deposited exceeds 1/4 of the thickness of the 12mm thick material. See attached photo:

加州检验员发现 ZPMC 在没有开关键返修报告的情况下对 SPCM 和非 SPCM 进行堆焊。这些板为联系梁的斜底板和底板

ZPMC 对整块底板的自由边进行堆焊，堆焊的深度超过了这块 12 mm 板的板厚的 1/4。详见附图。

Work By: 施工方: Liu jin Fei

Prepared by: 准备: Wang 09.8.19

Reviewed by QCE: 质量工程师批准: Zhao Sheng bao 8.19

☐ 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: 对堆焊区域进行UT、MT检测。 UT、MT inspect build up area.

Prepared by: 准备 HuYuzhang

Approved by QCA: 质量经理批准:

Reason for Nonconformance:
不符合原因: 没有按程序要求开出CWR后返修
Didn't follow repair procedure to issue CWR.

预防措施: 要按按程序要求，先开出CWR后再进行返修。
Perform according to repair procedure and issue CWR before repair

Approved by/批准: HuYuzhang

Technical Justification for Use-As-Is/Repair: ☐ Attachment 附件 ☐ Non-attachment 无附件
回用或返修的技术依据:

对堆焊区域进行UT、MT检测，并加强现场施工队管理。
Perform UT、MT inspection to the repair area, and enhance site supervision and management.

Reviewed /批准: ~~Mao Jin Ji 09/09~~

Verification: 确认: ☑ Acceptable 可接受 ☐ Unacceptable 不可接受

Verified by QCI/质检确认: Zhu Tian shu 09.09.03

Reviewed by QCA/质检主任审核:

DEPARTMENT OF TRANSPORTATION · District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

In Reply

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 04-Aug-2009

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

Job Name: SAS Superstructure

Document No: 05.03.06-000321

Dear: Mr. Charles Kanapicki

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Subject: NCR No. ZPMC-0342

Reference Description: Buttering of FB and SP of CB 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:

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- ☐ Non-Conformance Resolved.

Material Location: Xbeam

Lift:

Remarks:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material.

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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 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0342

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

File: 05.03.06

STATE OF CALIFORNIA--BUSINESS.TRANSPORTATION AND HOUSING AGENCY

Arnold Schwarzenegger, Governor

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
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Contract #: 04-0120F4
Cty. SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

Report No: NCR-000368
Date: 19-Jun-2009
NCR #: ZPMC-0342

Type of problem:

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

Bridge No: 34-0006
Component: Crossbeam #5

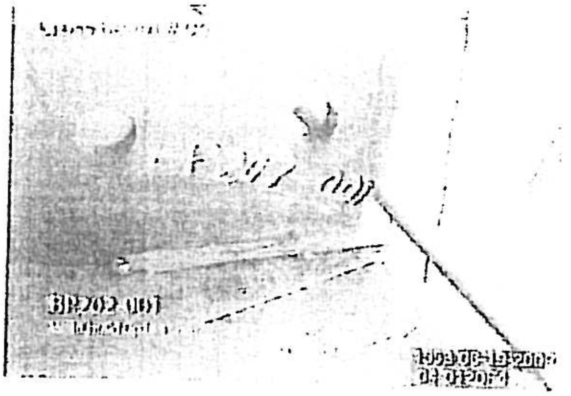
Reference Description: Buttering of FB and SP of CB 5

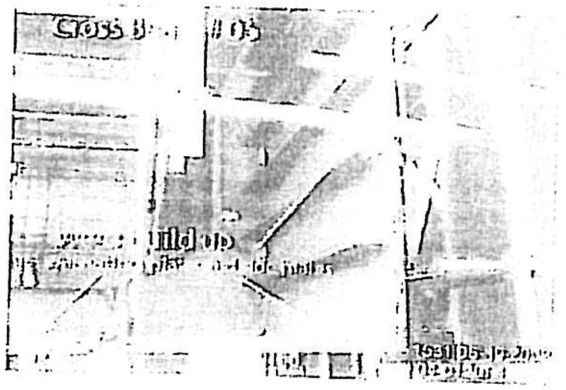
Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material. See attached photos:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)





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Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Li xiu hua

Time and method of notification: 1600 / Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1600 / Verbal

QC Inspector's Name: Liu Wei Wei

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

ZPMC	关键焊缝返修报告 Critical Welding Repair Report (CWR)				版本 Rev. No.: 1
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB5	报告编号 Report No.	B-CWR598
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	标准横梁 Standard Beam	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:

CB5已修割余量的底板BP204A, BP202A, BP201A, BP203A, BP205A, 腹板SP202A, (SP205A)比T肋短了约3-5mm, 且筋板有割伤。

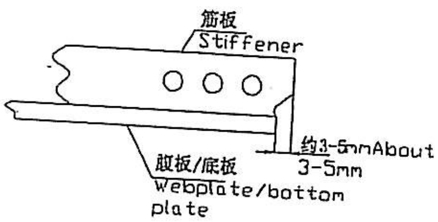
CB5 bottom plate(BP204A, BP202A, BP201A, BP203A, BP205A), web plate(SP202A, SP201A, SP203A, SP204A, SP206A, SP205A) was 3-5mm shorter than T-shape, and the stiffeners were gouged after cutting, see the following draft.

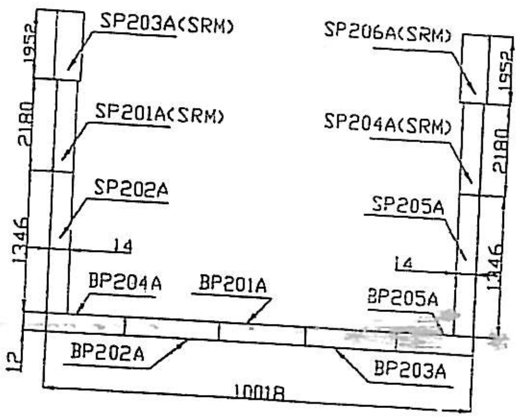
检验员 (Inspector): Guo Yuanting

日期 (Date): 2009-6-30

焊缝返修位置示意图:

Draft of Welding Discontinuity:





注: 图中
SP202A,SP205A,BP201A,BP202A,BP203A,BP204A,BP205A
7块板单元为SPCM板
Remark: SP202A,SP205A,
BP201A,BP202A,BP203A,BP204A,BP205A
were SPCM component

☐ APPROVED
☑ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction
SJE for RM 7/27/2009
Structure Representative Date

产生原因：

Cause:

工人在修割余量时，不够仔细，导致构件比T型钢短。

Worker wasn't carefully during trimming allowance caused component was shorter than T-shape.

车间负责人 (Foreman): Hu Yuzhang 日期 (Date): 09.07.17

处理意见

Disposition :

1. 工程师通知到现场,缺陷返修按照角焊缝返修程序；
2. 这次返修时，QC和Leader CWI到现场指导打磨，焊接和监控的指导工作；
3. 整个返修的过程，QC和Leader CWI应该有批准CWR的复印件；
4. QC和Leader CWI指导返修，以保证返修按照处理意见进行；
5. 对返修区域及靠近裂纹的母材进行硬度测试，在做硬度测试前应以口头和书面形式告知工程师，并且在硬度测试后但在下一步修复工作前向加州代表递交测试结果。

☐ APPROVED
☑ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction

SJE for RM 7/27/2009
Structure Representative Date

外壳板修补：

1. 根据批准的焊接工艺规程WPS准备坡口形式；
2. 做100%VT确保缺陷被去除；
3. 在坡口对侧加钢衬垫，具体参见AWS D1.5.3.13；
4. 根据批准的焊接工艺规程WPS进行预热及焊接；
5. 焊后去除钢衬垫，将焊缝打磨至与母材平齐；
6. 返修后按照图纸要求对所有的修补焊缝进行NDT检测，其中对于承受拉应力和反向应力构件的表面和边缘在进行焊接修补后，按照AWS D1.5章节中3.2.2.3的要求必须经过UT和MT检查。

筋板修补：

1. 根据批准的焊接工艺规程WPS准备坡口形式；
2. 做100%VT确保缺陷被去除；
3. 根据批准的返修焊接工艺规程WPS进行预热及焊接；
4. 将焊缝打磨至与母材平齐；
5. 对修补焊缝进行相应的NDT（VT、MT）检测。其中对于承受拉应力和反向应力构件的表面和边缘在进行焊接修补后，按照AWS D1.5章节中3.2.2.3的要求必须经过UT和MT检查。

1. The Engineer shall be notified and present during this repair. Indicate repair procedure;
2. QC and a Lead CWI shall be present and direct all grinding and welding operations during this repair.
3. QC and a Lead CWI shall have an approved copy of the CWR in hand prior to the repair.
4. QC and a Lead CWI shall direct the repair to ensure the repair is per the disposition requirements.
5. Perform hardness testing at repair area and base metal laying abroad cracks, provide verbal and written notification to Engineer prior to performing hardness testing, and submit the testing result to Caltrans for review prior to repairing after testing.

The plate repaired

1. Prepare excavation with relevant WPS.
2. VT to verify repair area is free of all defects.
3. Add steel backing at the back of groove according to AWS D1.5.3.13;
4. Preheat and weld according to the relevant WPS.
5. Gouge off the steel backing and grind the weld flush with base metal after welding;
6. Perform NDT inspection (VT、UT and MT) to the repaired welding according to the relevant requirement. UT and MT must be performed for SRM members in accordance with Section 3.2.2.3 of AWS D1.5 after repair.

I-Rib repaired:

1. Prepare excavation with relevant WPS.
2. VT to verify repair area is free of all defects.
3. Preheat and weld according to the relevant repaired WPS.
4. Grind the weld flush with base metal after welding;
5. Perform NDT inspection （MT） to the repaired welding according to the relevant requirement. UT and MT must be performed for SRM members in accordance with Section 3.2.2.3 of AWS D1.5 after repair.

工 艺：
Technical Engineer: Niu Zefeng 审核：
Approved By: Cuijianhua for chenbin 日期：
Date: 09.07.20

#R787-QCP-900

关键焊缝返修报告

Critical Welding Repair Report (CWR)

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB5	报告编号 Report No.	B-CWR598
合同号 Contract No.:	04-0120F4				
项目编号 Project No.:	ZP06-787	部件名称 Item Name:	标准横梁 Standard Beam	NDT报告编号 Report No.of NDT	NA

版本 Rev. No.: 1

纠正措施:

Corrective Action to Prevent Re-occurrence:

培训和教育工人，提高操作水平。

Train and educate worker to improve operation skill.

车间负责人 (Foreman): Hu Yuzhong 日期 (Date): 09.07.17

参照的WPS编号 Repair WPS No.:	For plate: WPS-345-SMAW-1G(1F)-FCM-Repair WPS-345-FCAW-1G(1F)-FCM-Repair WPS-345-SMAW-3G(3F)-FCM-Repair WPS-345-SMAW-3G(3F)-Repair WPS-345-FCAW-3G(3F)-Repair For stiffener: WPS-345-SMAW-2G(2F)-Repair WPS-345-FCAW-2G(2F)-Repair WPS-345-SMAW-3G(3F)-Repair WPS-345-FCAW-3G(3F)-Repair	工艺员 Technologist:	Niu Tiefeng 09.07.20
返修（碳刨）前预热温度 Preheat Temperature Before Gouging:	71B	返修的缺陷 Description of Discontinuity:	Cutting error
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	172°C(1G) 184°C(3G)
最大碳刨深度 Max. Depth of Gouge:	14mm	碳刨总长 Total Length of Gouge:	20946mm

焊工 Welder:	044790 (1G FCAW) 058102 (1G SMAW)	焊接类型 Welding Type:	FCAW/SMAW	焊接位置 Position:	1G. 3G
焊接电流 Current:	298 (1G) 183 (3G)	焊接电压 Voltage:	30 (1G) 24 (3G)	焊接速度 Speed:	443 (1G) 124 (3G)

返修后检查

Inspection After Repair:

外观检查 VT Result:	Acc	检验员 Inspector:	Chen xi	日期 Date:	2009.07.29.
NDT复检 NDT Result:	Acc	探伤员 NDT Person:	Lu anfeng / Xu Huaxiang	日期 Date:	09.08.06 / 2009.7.24

见证：

Witness/Review:

备注：

Remark：

#R787-QCP-900

BVI 2502

ZPMC

周数	91 #
日期	2009.07.29

Visual Weld Inspection Report
焊缝目视检查报告

Caltrans Contract No. 加州合同编号	04-0120F4	Girder/ 梁:	OBG Cross Beam
		Tower/ 塔:	NA
		Quality Control Representative: 质检代表:	
Project No.: 项目名称	San Francisco Oakland Bay Bridge 美国海湾大桥	C W I : 检验员:	chen xi 0707 2021
Project No.: 项目编号:	ZP06-787	Quality Assurance Manager ~Approval 质量控制经理:	

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
CB202C	044790	1G	Supercored71H	√	√	√	√	√	√	√	ACC	NA	NA
CB202D	058102	3G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA
CB202F	058102	3G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA

☐ After root weld

☑ After CWR or WRR No.:B-CWR598

☐ After cover pass

☐ After HSR No.:

☐ 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-7871	DATE	2009.07.29	PAGE	1 OF 1	Revision No: 0

PROJECT NO. :工程编号 ZP06-787		CONTRACTOR : CALTRANS	
ITEMS NAME: 部件名称 OBG bottom plate/web plate	DRAWING NO.: CB202C/CB202D/CB202F 图号	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号	
REFERENCING CODE 参考规范 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3)	PROCEDURE NO. 程序编号 ZPQC-UT-01	
WELDING PROCESS 焊接方法 FCAW	JOINT TYPE 焊缝类型 NA	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST ,2009	
EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 071565311, 061488510, 061495811, 070152011,
CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE Ⅱ	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345F2-X 12/5/14mm	

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	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 Indication Level a	Reference Level b	Attenuation Factor c	Indication Rating d	DISCONTINUITY 不连续性 LOCATION OF DISCONTINUITY 不连续位置(mm) Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y	Discontinuity Evaluation 缺陷估计	Remark 备注
CB202C		0				20								ACC.	Base metal per B-CWR598
CB202D		0				20								ACC.	Base metal per B-CWR598
CB202F		0				20								ACC.	Base metal per B-CWR598
BLANK															

EXAMINED BY主探 Han Feng LEVEL - II SIGN / DATE 09.07.29	REVIEWED BY 审核 Sun Yin LEVEL - II SIGN / DATE 09.07.29
质量经理 / QCM 签字 SIGN / 日期 DATE	用户CUSTOMER 签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

ZPMC

REPORT OF MAGNETIC PARTICLE EXAMINATION
磁粉检测报告

REPORT NO. 报告编号 B787-MT-12719	DATE日期 2009.08.04	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:	CB202F CB202D WEB/BOTTOM PLATE	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. 28ST ,2009
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
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	√ WELDING 焊接件 ☐ CASTING 铸件 ☐ FORGING 锻造	Material & thickness 母材,厚度	A709M-345F2-X 14/12 mm
WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	NA

WELD I.D. 焊缝编号	DISCONTINUITY不连续性 INDICATION 指示	TYPE 类型	LENGTH IN mm 长度	ACCEPT 接受	REJECT 拒收	REMARKS 备注
CB202C						BASE MATERIAL
CB202D						BASE MATERIAL
CB202F						BASE MATERIAL
AFTER B-CWR598						
BLANK						

EXAMINED BY主探 Xu hua xiang Xu Hua xiang LEVEL - II SIGN 签名 / DATE日期 09.08.04	REVIEWED BY 审核 Sun Gong chang LEVEL-II SIGN / DATE日期 09.08.04
质量经理 / QCM Li Zhen 签字 SIGN / 日期 DATE 09-8.11	用户CUSTOMER 签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000321

Subject: NCR No. ZPMC-0342

Dated: **30-Dec-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000338 Rev: 02**

Contractor's Proposed Resolution:

Reference Resolution: As requested by CT, ZPMC is now submitting the correct MT reports. ZPMC requests closure of this NCR.

As requested by CT, ZPMC is now submitting the correct MT reports. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000338R02;

Caltrans' comments:

Status: CLO

Date: 30-Dec-2009

Documentation received is acceptable to close this NCR.

Submitted by: Howe, Bill

Date: 30-Dec-2009

Attachment(s):

ZPMC

No. B-522

LETTER OF RESPONSE

TO: American Bridge/Flour
DATE: 2009-12-08
REGARDING: NCR-000368(ZPMC-0342)

With this letter of response, ZPMC requests closure for CALTRANS NCR-000368(ZPMC-0342), what mentioned that QA observed buttering of FB and SP of CB5 without approved CWR.
Before these repair working, ZPMC has got an approved B-CWR598.
So ZPMC provide internal NCR, CWR and NDT documentation, hoping CALTRANS could take a review and consider close this NCR.

ATTACHMENT:
NCR-B-237
NCR-000368(ZPMC-0342)
B-CWR598
B787-UT-7871
B787-MT-12719

12/08/09

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-237(ZPMC-0342)
Item: Buttering of FB and SP of CB 5 名称描述: 顶板乱堆放	Item Number: 件号: N/A
	Drawing: 图号: CB5
Location: 位置:	Date: 日期: 2009-08-18

Description of Nonconformance:
不符合项状态描述:

Caltrans Quality Inspector observed ZPMC personal performing buttering on both the SPCM and non SPCM portions of CB5 without an approved Critical Welding Repair ,The members can be identified as the side plates and bottom plate for the crossbeam(reference drawings CB202C,CB202D,&CB202F).

Buttering was performed to correct dimensional issues with the member ,and has been performed throughout the entire length of the bottom plate and both side plates, The amount of weld material deposited exceeds 1/4 of the thickness of the 12mm thick material. See attached photo:

加州检验员发现 ZPMC 在没有开关键返修报告的情况下对 SPCM 和非 SPCM 进行堆焊。这些板为联系梁的斜底板和底板

ZPMC 对整块底板的自由边进行堆焊，堆焊的深度超过了这块 12 mm 板的板厚的 1/4。详见附图。

Work By: 施工方: Liu jin Fei
Prepared by: 准备: Wang 09.8.19
Reviewed by QCE: 质量工程师批准: Zhao Sheng bao 8.19

☐ 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: 对堆焊区域进行UT、MT检测. UT. mT inspect build up area.

Prepared by: 准备 HuYuzhang
Approved by QCA: 质量经理批准: ______

Reason for Nonconformance:
不符合原因: 没有按程序要求开出CWR后返修.
Didn't follow repair procedure to issue CWR.

预防措施: 严格按程序要求，先开出CWR后再进行返修.
Perform according to repair procedure and issue CWR before repair

Approved by/批准: HuYuzhang

Technical Justification for Use-As-Is/Repair: ☐ Attachment 附件 ☐ Non-attachment 无附件
回用或返修的技术依据:

对堆焊区域进行UT.MT、检测，并加强现场施工队管理.
Perform UT. MT inspection to the repair area, and enhance site supervision and management.

Reviewed /批准: ~~Mcadin 09/09~~

Verification: 确认: ☑ Acceptable 可接受 ☐ Unacceptable 不可接受

Verified by QCI/质检确认: Zhu Tian shu 09.09.03
Reviewed by QCA/质检主任审核: ______

In Review

DEPARTMENT OF TRANSPORTATION · District 4 Toll Bridge
666 Feng Bin Road Room 706, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	Date:	04-Aug-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:	05.03.06-000321
Subject:	NCR No. ZPMC-0342		

Reference Description: Buttering of FB and SP of CB 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: Xbeam Lift:

Remarks:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material.

See attached NCR No. ZPMC-0342 for details.

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 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0342

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

File: 05.03.06

STATE OF CALIFORNIA--BUSINESS.TRANSPORTATION AND HOUSING AGENCY

Arnold Schwarzenegger, Governor

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
Report No: NCR-000368
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Date: 19-Jun-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island
NCR #: ZPMC-0342

Type of problem:

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

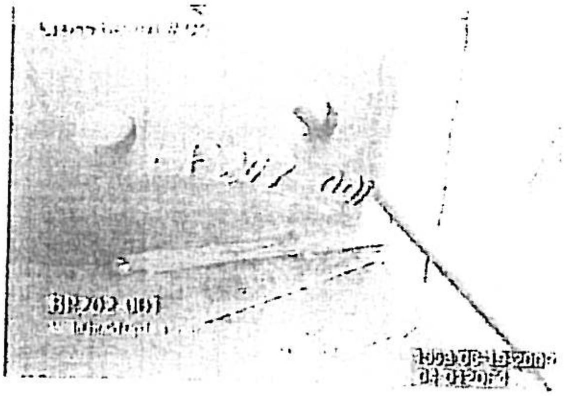
Bridge No: 34-0006
Component: Crossbeam #5

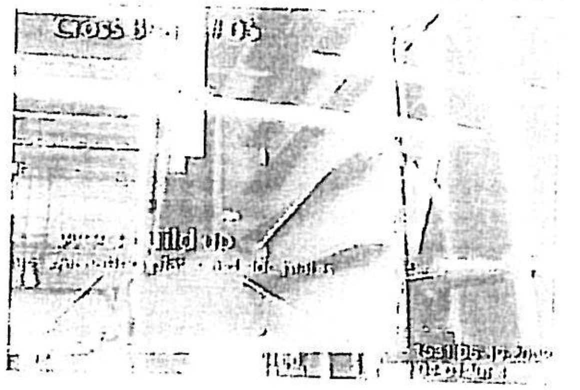
Reference Description: Buttering of FB and SP of CB 5

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material. See attached photos:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT





Applicable reference:

AWS D1.5 2002, Section 12.17.2 (7) 'Noncritical Repair Welds': " Noncritical repair welds are generally welds to deposit additional weld beads or layers to compensate for insufficient weld size and to fill limited excavations to remove unacceptable edge or surface discontinuities, rollover, or undercut, including:.. (7) Deposition of weld metal up to 10 mm (3/8 inch) deep, or 1/4 the base-metal thickness, whichever is less, to correct for length or joint geometry."

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Li xiu hua

Time and method of notification: 1600 / Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1600 / Verbal

QC Inspector's Name: Liu Wei Wei

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR

ZPMC	关键焊缝返修报告 Critical Welding Repair Report (CWR)				版本 Rev. No.: 1
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB5	报告编号 Report No.	B-CWR598
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	标准横梁 Standard Beam	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:

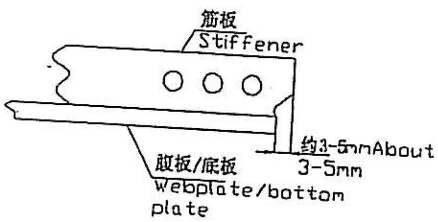
CB5已修割余量的底板BP204A, BP202A, BP201A, BP203A, BP205A, 腹板SP202A, (SP205A)比I肋短了约3-5mm, 且筋板有割伤。

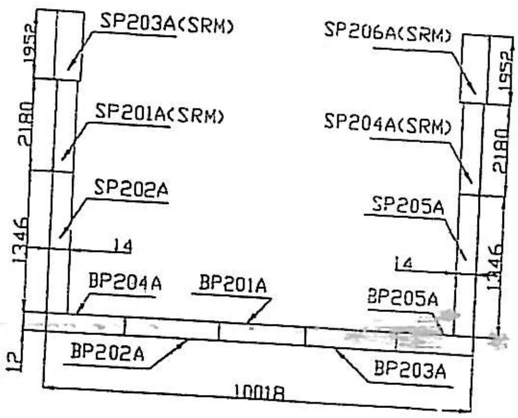
CB5 bottom plate(BP204A, BP202A, BP201A, BP203A, BP205A), web plate(SP202A, SP201A, SP203A, SP204A, SP206A, SP205A) was 3-5mm shorter than T-shape, and the stiffeners were gouged after cutting, see the following draft.

检验员 (Inspector): Guo Yuanting Guo Yuanting   日期 (Date): 2009-6-30

焊缝返修位置示意图:

Draft of Welding Discontinuity:





☐ APPROVED
☑ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction

SJE for RM — Structure Representative
7/27/2009 — Date

注: 图中
SP202A,SP205A,BP201A,BP202A,BP203A,BP204A,BP205A
7块板单元为SPCM板
Remark: SP202A,SP205A,
BP201A,BP202A,BP203A,BP204A,BP205A
were SPCM component

产生原因：

Cause:

工人在修割余量时，不够仔细，导致构件比T型钢短。

Worker wasn't carefully during trimming allowance caused component was shorter than T-shape.

车间负责人 (Foreman): Hu Yuzhang 日期 (Date): 09.07.17

处理意见

Disposition :

1. 工程师通知到现场,缺陷返修按照角焊缝返修程序；
2. 这次返修时，QC和Leader CWI到现场指导打磨，焊接和监控的指导工作；
3. 整个返修的过程，QC和Leader CWI应该有批准CWR的复印件；
4. QC和Leader CWI指导返修，以保证返修按照处理意见进行；
5. 对返修区域及靠近裂纹的母材进行硬度测试，在做硬度测试前应以[illegible]工程师，并且在硬度测试后但在下一步修复工作前向加州代表递交测试结果。

☐ APPROVED
☑ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction
SJE for RM 7/27/2009
Structure Representative Date

外壳板修补：

1. 根据批准的焊接工艺规程WPS准备坡口形式；
2. 做100%VT确保缺陷被去除；
3. 在坡口对侧加钢衬垫，具体参见AWS D1.5.3.13；
4. 根据批准的焊接工艺规程WPS进行预热及焊接；
5. 焊后去除钢衬垫，将焊缝打磨至与母材平齐；
6. 返修后按照图纸要求对所有的修补焊缝进行NDT检测，其中对于承受拉应力和反向应力构件的表面和边缘在进行焊接修补后，按照AWS D1.5章节中3.2.2.3的要求必须经过UT和MT检查。

筋板修补：

1. 根据批准的焊接工艺规程WPS准备坡口形式；
2. 做100%VT确保缺陷被去除；
3. 根据批准的返修焊接工艺规程WPS进行预热及焊接；
4. 将焊缝打磨至与母材平齐；
5. 对修补焊缝进行相应的NDT（VT、MT）检测。其中对于承受拉应力和反向应力构件的表面和边缘在进行焊接修补后，按照AWS D1.5章节中3.2.2.3的要求必须经过UT和MT检查。

1. The Engineer shall be notified and present during this repair. Indicate repair procedure;
2. QC and a Lead CWI shall be present and direct all grinding and welding operations during this repair.
3. QC and a Lead CWI shall have an approved copy of the CWR in hand prior to the repair.
4. QC and a Lead CWI shall direct the repair to ensure the repair is per the disposition requirements.
5. Perform hardness testing at repair area and base metal laying abroad cracks, provide verbal and written notification to Engineer prior to performing hardness testing, and submit the testing result to Caltrans for review prior to repairing after testing.

The plate repaired

1. Prepare excavation with relevant WPS.
2. VT to verify repair area is free of all defects.
3. Add steel backing at the back of groove according to AWS D1.5.3.13;
4. Preheat and weld according to the relevant WPS.
5. Gouge off the steel backing and grind the weld flush with base metal after welding;
6. Perform NDT inspection (VT、UT and MT) to the repaired welding according to the relevant requirement. UT and MT must be performed for SRM members in accordance with Section 3.2.2.3 of AWS D1.5 after repair.

I-Rib repaired:

1. Prepare excavation with relevant WPS.
2. VT to verify repair area is free of all defects.
3. Preheat and weld according to the relevant repaired WPS.
4. Grind the weld flush with base metal after welding;
5. Perform NDT inspection （MT） to the repaired welding according to the relevant requirement. UT and MT must be performed for SRM members in accordance with Section 3.2.2.3 of AWS D1.5 after repair.

工 艺：
Technical Engineer: Niu Zefeng 审核：
Approved By: Cuijianhua for chenbin 日期：
Date: 09.07.20

#R787-QCP-900

ZPMC

关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本 Rev. No.: 1

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB5	报告编号 Report No.	B-CWR598
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	标准横梁 Standard Beam	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:
Corrective Action to Prevent Re-occurrence:
培训和教育工人，提高操作水平。
Train and educate worker to improve operation skill.

车间负责人 (Foreman): Hu Yuzhang 日期 (Date): 09.07.17

参照的WPS编号 Repair WPS No.:	For plate: WPS-345-SMAW-1G(1F)-FCM-Repair WPS-345-FCAW-1G(1F)-FCM-Repair WPS-345-SMAW-3G(3F)-FCM-Repair WPS-345-SMAW-3G(3F)-Repair WPS-345-FCAW-3G(3F)-Repair For stiffener: WPS-345-SMAW-2G(2F)-Repair WPS-345-FCAW-2G(2F)-Repair WPS-345-SMAW-3G(3F)-Repair WPS-345-FCAW-3G(3F)-Repair	工艺员 Technologist:	Niu Tiefeng 09.07.20
返修（碳刨）前预热温度 Preheat Temperature Before Gouging:	NA	返修的缺陷 Description of Discontinuity:	cutting error
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	172°C(1G) 184°C(3G)
最大碳刨深度 Max. Depth of Gouge:	14mm	碳刨总长 Total Length of Gouge:	20946mm

焊工 Welder:	044790(1G FCAW) 058102(1G SMAW)	焊接类型 Welding Type:	FCAW/SMAW	焊接位置 Position:	1G. 3G
焊接电流 Current:	298 (1G) 183 (3G)	焊接电压 Voltage:	30(1G) 24(3G)	焊接速度 Speed:	443 (1G) 124 (3G)

返修后检查
Inspection After Repair:

外观检查 VT Result:	Acc	检验员 Inspector:	Chen xi	日期 Date:	2009.07.29.
NDT复检 NDT Result:	[illegible]	探伤员 NDT Person:	Lu anfung Liu Huaxiang	日期 Date:	09.08.06 2009.7.24

见证：
Witness/Review:

备注：
Remark：

#R787-QCP-900

BVI 2504

ZPMC

周数	91 #
日期	2009.07.29

Visual Weld Inspection Report
焊缝目视检查报告

Caltrans Contract No. 加州合同编号	04-0120F4	Girder/ 梁:	OBG Cross Beam
		Tower/ 塔:	NA
Project No.: 项目名称	San Francisco Oakland Bay Bridge 美国海湾大桥	Quality Control Representative: 质检代表:	
		C W I: 检验员:	chen xi 07072021
Project No.: 项目编号:	ZP06-787	Quality Assurance Manager ~Approval 质量控制经理:	

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
CB202C	044790	1G	Supercored71H	√	√	√	√	√	√	√	ACC	NA	NA
CB202D	058102	3G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA
CB202F	058102	3G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA

☐ After root weld

☑ After CWR or WRR No.:B-CWR598

☐ After cover pass

☐ After HSR No.:

☐ Others

#R787-QCP-603

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

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

ZPMC

REPORT NO. 报告编号 B787-UT-7871	DATE 2009.07.29	PAGE 1 OF 1		Revision No: 0
PROJECT NO. :工程编号 ZP06-787			CONTRACTOR : CALTRANS	
ITEMS NAME: 部件名称 OBG bottom plate/web plate	DRAWING NO.: 图号 CB202C/CB202D/CB202F		CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号	
REFERENCING CODE 参考规范 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3)		PROCEDURE NO. 程序编号 ZPQC-UT-01	
WELDING PROCESS 焊接方法 FCAW	JOINT TYPE 焊缝类型 NA		CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST ,2009	
EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 071565311, 061488510, 061495811, 070152011,	
CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE Ⅱ	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345F2-X 12/5/14mm		

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	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 Indication Level a	Reference Level b	Attenuation Factor c	Indication Rating d	DISCONTINUITY 不连续性 LOCATION OF DISCONTINUITY 不连续位置(mm) Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y	Discontinuity Evaluation 缺陷估计	Remark 备注
CB202C		0				20								ACC.	Base metal per B-CWR598
CB202D		0				20								ACC.	Base metal per B-CWR598
CB202F		0				20								ACC.	Base metal per B-CWR598

BLANK

EXAMINED BY主探 Han Feng
LEVEL - II SIGN / DATE 09.07.29

REVIEWED BY 审核 Sun Yin
LEVEL - II SIGN / DATE 09.07.29

质量经理 / QCM
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12719	DATE日期 2009.08.04	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:	CB202F CB202D WEB/BOTTOM PLATE	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. 28ST ,2009
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
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	√ WELDING 焊接件 ☐ CASTING 铸件 ☐ FORGING 锻造	Material & thickness 母材,厚度	A709M-345F2-X 14/12 mm
WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	NA

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
CB202C						
CB202D						BASE MATERIAL
CB202F						BASE MATERIAL
						BASE MATERIAL
AFTER B-CWR598						
BLANK						

EXAMINED BY主探 Xu hua xiang Xu Hua xiang LEVEL - II SIGN 签名 / DATE日期 09.08.04	REVIEWED BY 审核 Sun Gong chang LEVEL-II SIGN / DATE日期 09.08.04
质量经理 / QCM Li Tan 签字 SIGN / 日期 DATE 09-08.11	用户CUSTOMER 签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

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 #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island **Report No:** NCS-000432
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 13-Jan-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0342

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐		
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:**	34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**	
Procedural	☑	**Procedural**	☐	**Descripton:**			

Date the Non-Conformance Report was written: 19-Jun-2009

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing buttering on both SPCM and non SPCM portions of CB5 without an approved Critical Weld Repair. The members can be identified as the side plates and bottom plate for the Crossbeam (reference drawings CB202C, CB202D, & CB202F). Buttering was performed to correct dimensional issues with the member, and has been performed throughout the entire length of the bottom plate and both side plates. The amount of weld material deposited exceeds ¼ of the thickness of the 12mm thick material. See attached photos:

Contractor's proposal to correct the problem:

Submit CWR and perform required NDT.

Corrective action taken:

Contractor issued an internal NCR and submitted a CWR as required along with NDT documentation verifying the additional weld metal added is in conformance with Contract specifications.

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

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