

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

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

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China **Report No:** NCR-000311
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 07-Jun-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0285

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Crossbeam CB2, Segments 3AE & 3AW
Procedural	Procedural	Description:	

Reference Description: Missed MT Indications by QC on Base Metal Repairs, CB2/3AE, CB2/3AW Splices

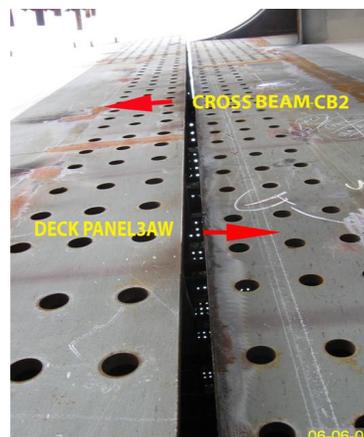
Description of Non-Conformance:

During random magnetic particle testing (MT) of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Quality Assurance (QA) Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC Quality Control (QC) MT technicians.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Amit K. Juvekar
Name of individual from Contractor notified: Kevin Chen
Time and method of notification: 2009/06/08, 10:00, Verbal
Name of Caltrans Engineer notified: Stanley Ku
Time and method of notification: 2009/06/09, 10:00, Verbal
QC Inspector's Name: Wang Lu
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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
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: 14-Jun-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: 05.03.06-000275

Subject: NCR No. ZPMC-0285

Reference Description: Missed MT Indications by QC on Base Metal Repairs, CB2/3AE, CB2/3AW Splices

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:** 03

Remarks:

During random magnetic particle testing (MT) of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Quality Assurance (QA) Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC Quality Control (QC) MT technicians.

See NCR report No. ZPMC-285 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem in quality control 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-0285

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000275

Subject: NCR No. ZPMC-0285

Dated: 03-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000276 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000276R00;

Caltrans' comments:

Status: REJ

Date: 21-Aug-2009

The proposed resolution is not acceptable. No Critical Weld Repair (CWR) report was submitted for the second base metal repair.

Please submit the CWR documentation as well as acceptable MT reports after the repair for areas of base metal in question. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0285 at that time.

Submitted by: Wright, Doug

Date: 21-Aug-2009

Attachment(s):



No. B-428

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-30

REGARDING: NCR-000311 (ZPMC-0285)

With this letter of response, ZPMC requests closure for Caltrans **NCR-000311 (ZPMC-0285)**. Base on the description in the non-conformance report, we have checked with our QC guy found the real reason is that ZPMC no complete the NDT inspector after the base metal repair. By the way we submitted the CWR for the engineer approval, as the comments of the CWR we performed the corresponding weld repair and do the MT inspection to make sure the weld repair is acceptable.

In additional we provided the critical weld repair report and the final VT/MT report to support the good quality of the repair splice areas base metal.

so base on the above explanation and attached documentation . ZPMC applies to close the caltrans's report **NCR-000311 (ZPMC-0285)**.

Please reference attached documentation for acceptance and closure the **NCR-000311 (ZPMC-0285)**.

ATTACHMENT:

NCR-000311 (ZPMC-0285)

ZPMC internal NCR

The approval CWR

The final VT/MT reports

Chao Shuangbao

2009. 7. 30.



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-188
 (NCR-000311)

Item: Missed MT Indications
 名称描述: MT 漏检

Item Number:
 件号: N/A

Drawing:
 图号: CB2/3AE, CB2/3AW

Location: OBG Trail Assembly Yard
 位置: OBG 外场

Date:
 日期: 2009-06-19

Description of Nonconformance:

不符合项状态描述:

During random magnetic particle testing of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC MT technicians.

在对 CB2/3AE, CB2/3AW 螺栓连接板处, 母材返修位置随机 MT 抽查中发现部分线状缺陷。此处母材返修是为了对连接板固定焊缝在配钻完成去除后, 造成的损伤进行修复。这些位置已经被检测并由 ZPMC MT 人员接受合格。

参考标准: 标书章节 8.3 “QC 应承担承包商的职责。最少对每个焊缝焊前、焊中、焊后进行检查和检测并确保母材以及施工满足标准要求”。

Work By:

施工方:

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

6.19

Disposition: Use as is

处理措施: 回用

Repair

返修

Reject

拒收

Recommendation:

建议: 重新检测后返修. Re-inspect then repair it if it affirms.

Prepared by:

准备

Approved by QCA:

质量经理批准

Reason for Nonconformance:

不符合原因: 母材修补处漏检测, 致使裂纹漏检。

Didn't inspect it after base metal repair caused crack residual error.

预防措施: 加强监督, 加强复查. Increase supervision and re-inspection

Approved by/批准:

Technical Justification for Use-As-Is/Repair:

回用或返修的技术依据:

Attachment

Non-attachment

附件

无附件

Reviewed /批准:

Verification:

Acceptable

确认:

可接受

Unacceptable

不可接受

Verified by QCI/质检确认:

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:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 14-Jun-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: 05.03.06-000275

Subject: NCR No. ZPMC-0285

Reference Description: Missed MT Indications by QC on Base Metal Repairs, CB2/3AE, CB2/3AW Splices

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Material Location: Xbeam

Lift: 03

Remarks:

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See NCR report No. ZPMC-285 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem in quality control 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-0285

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

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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, Shanghai, P.R. China

Report No: NCR-000311

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Jun-2009

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

NCR #: ZPMC-0285

Type of problem:

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

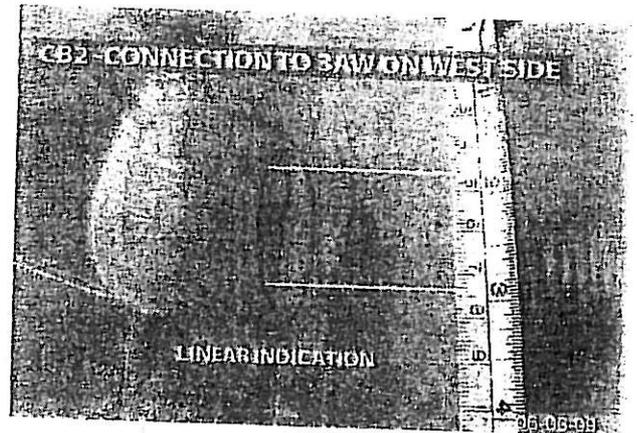
Bridge No: 34-0006

Component: Crossbeam CB2, Segments 3AE & 3AW

Reference Description: Missed MT Indications by QC on Base Metal Repairs, @B2/3AE, CB2/3AW Splices

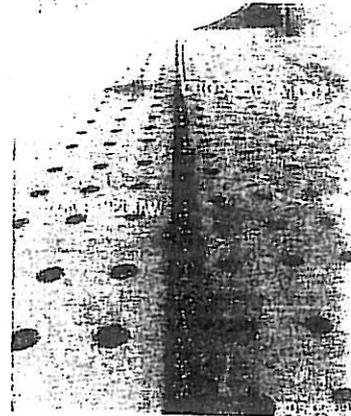
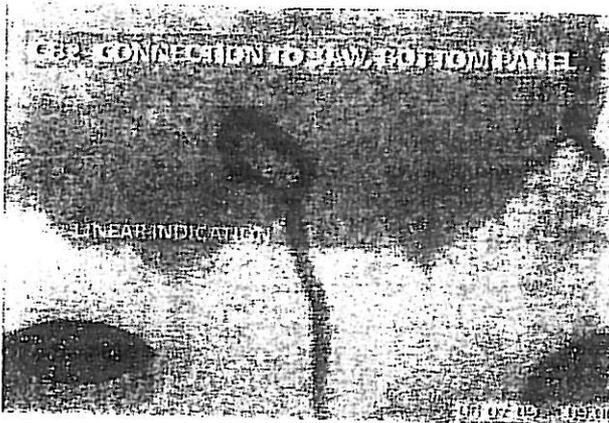
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 2009/06/08, 10:00, Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 2009/06/09, 10:00, Verbal

QC Inspector's Name: Wang Lu

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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR



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

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB2, CB3	报告编号 Report No.:	B-CWR571
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	联系梁 Strut plate	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

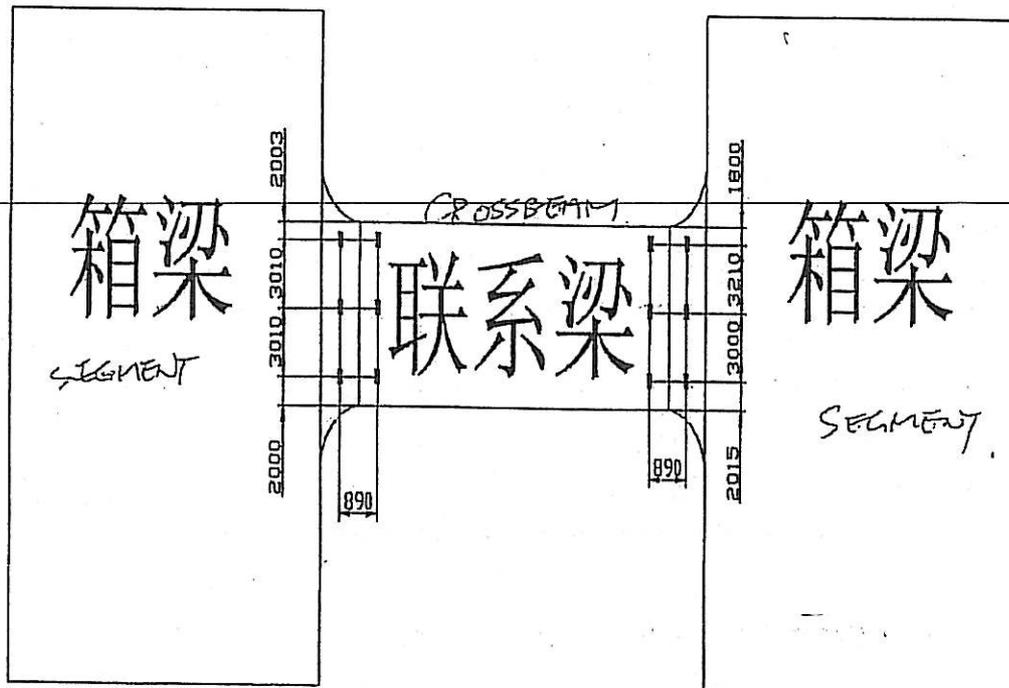
CB2, CB3联系梁在去除连接板与箱梁上点焊时, 发现伤及联系梁和箱梁的母材, 最大深度为3MM, 具体位置见下图:
After removing CB2 and CB3 strut plate tack weld, the base metal was gouged, maximum 3mm, the detail see the following draft.

检验员 (Inspector): Way Jie Wang

日期 (Date): 2009.06.17

焊缝返修位置示意图:

Draft of Welding Discontinuity:



Remark: blank point was base metal gouged area.

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial WJ Date: 6/23/09

产生原因:

Cause:

在打磨去除点焊时,工人操作失误,导致母材损伤.

The worker operated error during removing tack welds caused base metal gouged.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

07.06.18

处理意见

Disposition :

1. 准备一个正确的接头型式,具体参照相应的返修WPS;
2. 将碳刨区域打磨光滑,开始和结束的接头交错布置;
3. 对修补区域进行VT与MT检测;
4. 根据批准的返修焊接工艺规程(WPS)进行预热及焊接;
5. 将修补区域打磨与母材或相邻焊缝平齐;
6. 对修补区域作100%VT与MT检测;

1. Prepare excavation according to the approved repair WPS.
2. Grind the gouged area to a smooth and shiny finish, with tapered ends, to ensure staggered starts and stops.
3. VT and MT the repair area.
4. Preheat and weld according to the relevant repair WPS.
5. Grind the repaired area flush with base metal or the adjacent weld.
6. Perform VT and MT over 100% of the repair area.

工艺:

Technical Engineer:

Niu Tiefang

审核:

Approved By:

Wang Jianhua
for chenbin.

日期:

Date:

07.06.19

This document is APPROVED
 State of California
 DEPARTMENT OF TRANSPORTATION
 Pursuant to Section 5-1.02 of the
 Standard Specifications
 Initial: [Signature] Date: 6/23/19

#R787-QCP-900



关键焊缝返修报告

版本
Rev. No.:

Critical Welding Repair Report (CWR)

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB2, CB3	报告编号 Report No.:	B-CWR571
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	联系梁 Strut plate	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

培训和教育操作工, 提高技术和水平。

Train and educate operator to improve technology and skill.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

09.06.18

参照的WPS编号 Repair WPS No.:	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1	工艺员 Technologist:	N.W. Trefert 09.06.19
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	95°C	返修的缺陷 Description of Discontinuity:	母材损伤
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	120°C
最大碳刨深度 Max. Depth of Gouge:	6mm	碳刨总长 Total Length of Gouge:	1500mm

焊工 Welder:	048659	焊接类型 Welding Type:	SMAW	焊接位置 Position:	1G
焊接电流 Current:	168	焊接电压 Voltage:	24	焊接速度 Speed:	130

返修后检查
Inspection After Repair:

外观检查 VT Result:	Acc	检验员 Inspector:	Luan Zhao Gang 07120761	日期 Date:	09.6.24
NDT复检 NDT Result:	Acc	探伤员 NDT Person:	Jin Jiauliang	日期 Date:	09.6.24

见证:

Witness/Review:

备注:

Remark:

#R787-QCP-900

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial: [Signature] Date: 6/23/19



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12521 DATE日期 2009.07.29 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: CB2 OBG STRUT 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. 28 ST , 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	<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 NA
WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	BASE METAL

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			
SP221				ACC.		100%MT
SP219				ACC.		100%MT
SP220				ACC.		100%MT
FB213				ACC.		100%MT
FB212				ACC.		100%MT
FB211				ACC.		100%MT
SP218				ACC.		100%MT
SP216				ACC.		100%MT
SP217				ACC.		100%MT
BP215				ACC.		100%MT
BP213				ACC.		100%MT
BP212				ACC.		100%MT
BP214				ACC.		100%MT
BP216				ACC.		100%MT
DP527				ACC.		100%MT
DP525				ACC.		100%MT
DP524				ACC.		100%MT
DP526				ACC.		100%MT
DP528				ACC.		100%MT

EXAMINED BY 主探 Jin Jianting <i>Jin Jianting</i>	REVIEWED BY 审核 <i>Sun Guoyang</i>
LEVEL-II SIGN 签名 / DATE日期 <i>09.07.29</i>	LEVEL-II SIGN / DATE日期 <i>2009.07.29</i>
质量经理 / QCM <i>123123123</i>	用户 CUSTOMER
签字 SIGN / 日期 DATE <i>7.29</i>	签字 SIGN / 日期 DATE

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000275

Subject: NCR No. ZPMC-0285

Dated: 14-Sep-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000276 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has attached the CWR, subsequent MT reports and also an internal ZPMC NCR documenting this nonconformance

ZPMC has stated that the reason indications were discovered is they did not perform NDT after the base metal repair. ZPMC has attached the CWR, subsequent MT reports and also an internal ZPMC NCR documenting this nonconformance. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000276R01;

Caltrans' comments:

Status: CLO

Date: 24-Sep-2009

Contractor has submitted all required documentation

Submitted by: Chao, Ching

Date: 24-Sep-2009

Attachment(s):



No. B-428

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-30

REGARDING: NCR-000311 (ZPMC-0285)

With this letter of response, ZPMC requests closure for Caltrans NCR-000311 (ZPMC-0285). Base on the description in the non-conformance report, we have checked with our QC guy found the real reason is that ZPMC no complete the NDT inspector after the base metal repair. By the way we submitted the CWR for the engineer approval, as the comments of the CWR we performed the corresponding weld repair and do the MT inspection to make sure the weld repair is acceptable.

In additional we provided the critical weld repair report and the final VT/MT report to support the good quality of the repair splice areas base metal.

so base on the above explanation and attached documentation . ZPMC applies to close the caltrans's report NCR-000311 (ZPMC-0285).

Please referance attached documentation for acceptance and closure the NCR-000311 (ZPMC-0285).

ATTACHMENT:

NCR-000311 (ZPMC-0285)

ZPMC internal NCR

The approval CWR

The final VT/MT reports

Chao Shuangbo

2009. 7. 30



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-188
(NCR-000311)

Item: Missed MT Indications
名称描述: MT 漏检

Item Number:
件号: N/A

Drawing:
图号: CB2/3AE, CB2/3AW

Location: OBG Trail Assembly Yard
位置: OBG 外场

Date:
日期: 2009-06-19

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

During random magnetic particle testing of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC MT technicians.

在对 CB2/3AE, CB2/3AW 螺栓连接板处, 母材返修位置随机 MT 抽查中发现部分线状缺陷。此外母材返修是为了对连接板固定焊缝在配钻完成去除后, 造成的损伤进行修复。这些位置已经被检测并由 ZPMC MT 人员接受合格。

参考标准: 标书章节 8.3 "QC 应承担承包商的职责。最少对每个焊缝焊前、焊中、焊后进行检查和检测并确保母材以及施工满足标准要求"。

Work By: Li Liang Prepared by: Li Tan Reviewed by QCE: Zhou Shuang
施工方: 2009.06.19 准备: 6/19/09 质量工程师批准: 6.19

Drawing Error Material Defect Fabrication Error Other
图纸错误 材料缺陷 制作错误 其他原因

Disposition: Use as is Repair Reject
处理措施: 回用 返修 拒收

Recommendation:

建议: 重新检测后返修 Re-inspect then repair it if it affirms.

Prepared by: Li Liang Approved by QCA: _____
准备 2009.06.19 质量经理批准

Reason for Nonconformance:

不符合原因: 母材修补处漏检测, 致使裂纹漏检。

Didn't inspect it after base metal repair caused crack residual error.

预防措施: 加强监督, 加强复查 Enhance supervision and re-inspection

Approved by/批准: Li Liang 2009.06.19

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: _____

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bln 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 Date: 14-Jun-2009
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: 05.03.06-000275
Subject: NCR No. ZPMC-0285

Reference Description: Missed MT Indications by QC on Base Metal Repairs, CB2/3AE, CB2/3AW Splices

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: 03

Remarks:

During random magnetic particle testing (MT) of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Quality Assurance (QA) Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC Quality Control (QC) MT technicians.

See NCR report No. ZPMC-285 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem in quality control 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-0285

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection

Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

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

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000311

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Jun-2009

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

NCR #: ZPMC-0285

Type of problem:

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

Bridge No: 34-0006

Component: Crossbeam CB2, Segments 3AE & 3AW

Reference Description: Missed MT Indications by QC on Base Metal Repairs, CB2/3AE, CB2/3AW Splices

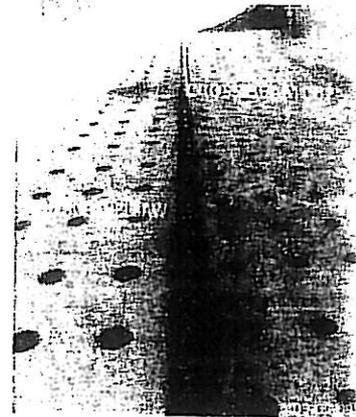
Description of Non-Conformance:

During random magnetic particle testing (MT) of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Quality Assurance (QA) Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC Quality Control (QC) MT technicians.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8.3 – "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 (02) Section 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Amit K. Juvekar

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 2009/06/08, 10:00, Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 2009/06/09, 10:00, Verbal

QC Inspector's Name: Wang Lu

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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR



关键焊缝返修报告

版本
Rev. No.:

Critical Welding Repair Report (CWR)

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB2, CB3	报告编号 Report No.:	B-CWR571
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	联系梁 Strut plate	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

CB2, CB3联系梁在去除连接板与箱梁上点焊时, 发现伤及联系梁和箱梁的母材, 最大深度为 3 MM, 具体位置见下图:

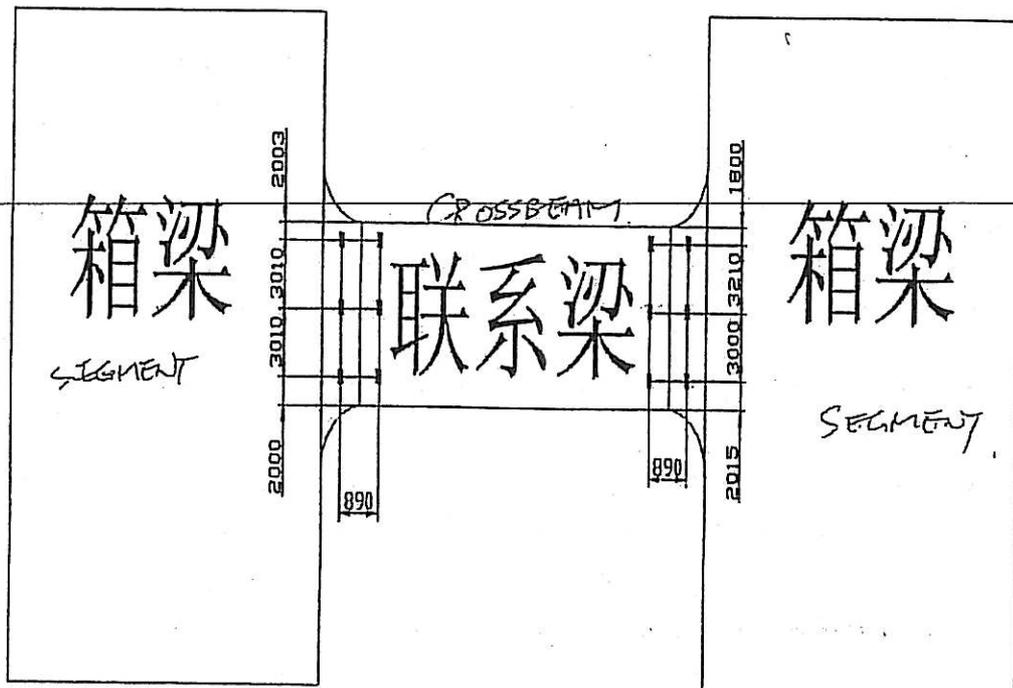
After removing CB2 and CB3 strut plate tack weld, the base metal was gouged, maximum 3mm, the detail see the following draft.

检验员 (Inspector): Way Jie
W a n g J i e

日期 (Date): 2009.06.17

焊缝返修位置示意图:

Draft of Welding Discontinuity:



Remark: blank point was base metal gouged area.

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial WJ Date: 6/23/09

产生原因:

Cause:

在打磨去除点焊时, 工人操作失误, 导致母材损伤.

The worker operated error during removing tack welds caused base metal gouged.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

07.06.18

处理意见

Disposition:

1. 准备一个正确的接头型式, 具体参照相应的返修WPS;
2. 将碳刨区域打磨光滑, 开始和结束的接头交错布置;
3. 对修补区域进行VT与MT检测;
4. 根据批准的返修焊接工艺规程 (WPS) 进行预热及焊接;
5. 将修补区域打磨与母材或相邻焊缝平齐;
6. 对修补区域作100%VT与MT检测;

1. Prepare excavation according to the approved repair WPS.
2. Grind the gouged area to a smooth and shiny finish, with tapered ends, to ensure staggered starts and stops.
3. VT and MT the repair area.
4. Preheat and weld according to the relevant repair WPS.
5. Grind the repaired area flush with base metal or the adjacent weld.
6. Perform VT and MT over 100% of the repair area.

工艺:

Technical Engineer:

Niu Tianfeng

审核:

Approved By:

Wang Jianhua

for chenbin.

日期:

Date:

07.06.19

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section B-1.02 of the
Standard Specifications
Initial *WJ* Date: 6/23/19

#R787-QCP-900



关键焊缝返修报告

版本
Rev. No.:

Critical Welding Repair Report (CWR)

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB2, CB3	报告编号 Report No.:	B-CWR571
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	联系梁 Strut plate	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

培训和教育操作工, 提高技术和水平。

Train and educate operator to improve technology and skill.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

09.06.18

参照的WPS编号 Repair WPS No.:	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1	工艺员 Technologist:	N.W. Tiefen 09.06.19
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	95°C	返修的缺陷 Description of Discontinuity:	母材损伤
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	120°C
最大碳刨深度 Max. Depth of Gouge:	6mm	碳刨总长 Total Length of Gouge:	1500mm

焊工 Welder:	048659	焊接类型 Welding Type:	SMAW	焊接位置 Position:	1G
焊接电流 Current:	168	焊接电压 Voltage:	24	焊接速度 Speed:	130

返修后检查 Inspection After Repair:					
外观检查 VT Result:	Acc	检验员 Inspector:	Luan zhao gang 07120761	日期 Date:	09.6.24
NDT复检 NDT Result:	Acc	探伤员 NDT Person:	Jin jiancheng	日期 Date:	09.6.24

见证:
Witness/Review:备注:
Remark:

#R787-QCP-900



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12521 DATE日期 2009.07.29 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: CB2 OBG STRUT 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. 28 ST , 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	<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 NA
WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	BASE METAL

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			
SP221				ACC.		100%MT
SP219				ACC.		100%MT
SP220				ACC.		100%MT
FB213				ACC.		100%MT
FB212				ACC.		100%MT
FB211				ACC.		100%MT
SP218				ACC.		100%MT
SP216				ACC.		100%MT
SP217				ACC.		100%MT
BP215				ACC.		100%MT
BP213				ACC.		100%MT
BP212				ACC.		100%MT
BP214				ACC.		100%MT
BP216				ACC.		100%MT
DP527				ACC.		100%MT
DP525				ACC.		100%MT
DP524				ACC.		100%MT
DP526				ACC.		100%MT
DP528				ACC.		100%MT

EXAMINED BY主探 Jin Jianting <i>Jin Jianting</i>	REVIEWED BY审核 <i>Sun Guoyang</i>
LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM <i>09.07.29</i>	LEVEL-II SIGN / DATE日期 用户CUSTOMER <i>2009.07.29</i>
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-000358**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0285**Type of problem:**

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

Date the Non-Conformance Report was written: 07-Jun-2009**Description of Non-Conformance:**

During random magnetic particle testing (MT) of base metal repairs associated with the bolted splice plate connection areas of CB2 to 3AE & 3AW, Caltrans Quality Assurance (QA) Inspector observed linear indications. The base metal repairs were performed to correct damage that resulted from removing the temporary welds holding the splice plates in place while match drilling was completed. These areas were previously tested & accepted by ZPMC Quality Control (QC) MT technicians.

Contractor's proposal to correct the problem:

Repair missed indications and submit subsequent NDT reports verifying the repair is in compliance.

Corrective action taken:

ZPMC performed base metal repairs in the areas in question and submitted required documentation verifying that the repairs are in conformance. ABF issued an internal NCR to ZPMC.

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