

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-000559

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 23-Dec-2009

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

NCR #: ZPMC-0532

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Crossbeam CB16
Procedural	Procedural	Description:	

Reference Description: Base Metal Repairs without Engineer's Approval, CB16

Description of Non-Conformance:

During a random visual inspection of the Orthotropic Box Girder (OBG) Crossbeam CB16, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Seismic Performance Critical Member (SPCM) base metal repairs on the Side Panel (SP) of Crossbeam CB16 without the Engineer's approval.

-The Bottom Panel (BP) was identified as: BP204A

-The SP was identified as: SP202A

-The weld number between the SP and BP is identified as: CB202A-016-005

-The WPS used was WPS-345-SMAW-3G (3F)-Repair.



Applicable reference:

Standard Specifications (99) section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair.”

ZPMC Welding Quality Control Plan, Section 9.2.1.2: “Prior approval of the Engineer shall be obtained for repairs to base metal other than what was identified in Section 9.2.1.1 of this manual and the repair of all other cracks.”

AWS D1.5/2002, Section 3.7.4: “Prior approval of the Engineer shall be obtained for repairs to base metal.”

Who discovered the problem: Vibin Kumar
Name of individual from Contractor notified: Wang Wen Bin
Time and method of notification: 1030 hours, 12-23-09, Verbal
Name of Caltrans Engineer notified: Bill Howe
Time and method of notification: 1230 hours, 12-23-09, Verbal
QC Inspector's Name: Zheng Zhi 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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Guest,Skylar	SMR
Reviewed By:	Wahbeh,Mazen	SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000520

Subject: NCR No. ZPMC-0532

Dated: 17-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000624 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the repair report and associated NDT to show that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC is providing the repair report and associated NDT to show that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000624R00;

Caltrans' comments:

Status: CLO

Date: 05-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0532 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 05-Apr-2010



No. B-649

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-8

REGARDING: NCR-000559 (ZPMC-0532)

With this letter of response, ZPMC requests closure of CT NCR-000559 (ZPMC-0532) what mentioned about the base metal repair after temporary attachment removal .

Based on the attached CWR and NDT documentation, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000559 (ZPMC-0532)

B-CWR1040

B787-MT-19922

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

3/8/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 25-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: 05.03.06-000520

Subject: NCR No. ZPMC-0532

Reference Description: Base Metal Repairs without Engineer's Approval, CB16

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:** N/A

Remarks:

During a random visual inspection of the Orthotropic Box Girder (OBG) Crossbeam CB16, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Seismic Performance Critical Member (SPCM) base metal repairs on the Side Panel (SP) of Crossbeam CB16 without the Engineer's approval.

- The Bottom Panel (BP) was identified as: BP204A
- The SP was identified as: SP202A
- The weld number between the SP and BP is identified as: CB202A-016-005
- The WPS used was WPS-345-SMAW-3G (3F)-Repair.

Action Required and/or Action Taken:

On subsequent repairs, notify the engineer prior to the start of work. Submit weld repair records for this repair to the engineer. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0532

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

DEPARTMENT OF TRANSPORTATION

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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-000559**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0532**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:**Bridge No:** 34-0006**Component:** Crossbeam CB16**Reference Description:** Base Metal Repairs without Engineer's Approval, CB16**Description of Non-Conformance:**

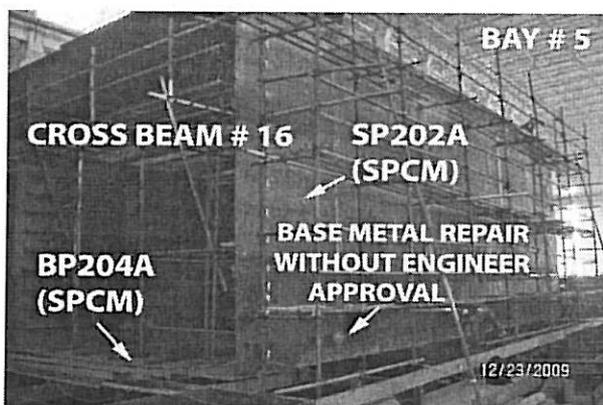
During a random visual inspection of the Orthotropic Box Girder (OBG) Crossbeam CB16, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Seismic Performance Critical Member (SPCM) base metal repairs on the Side Panel (SP) of Crossbeam CB16 without the Engineer's approval.

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-The WPS used was WPS-345-SMAW-3G (3F)-Repair.

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair.”

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Time and method of notification: 1030 hours, 12-23-09, Verbal
Name of Caltrans Engineer notified: Bill Howe
Time and method of notification: 1230 hours, 12-23-09, Verbal
QC Inspector's Name: Zheng Zhi 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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
Reviewed By:	Wahbeh, Mazen	SMR



关键性焊缝返修报告

Welding Repair Report

版本 Rev. No.

1

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SP202A	报告编号 Report No.	B-CWR1040
合同号 Contract No.:	04-0120F4	部件名称 Items Name	CB16横梁 CB16 Beam	NDT报告编号 Report No. of NDT	
项目编号 Project No.:	ZP06-787				NA

焊缝缺陷描述:

Description of welding discontinuity:

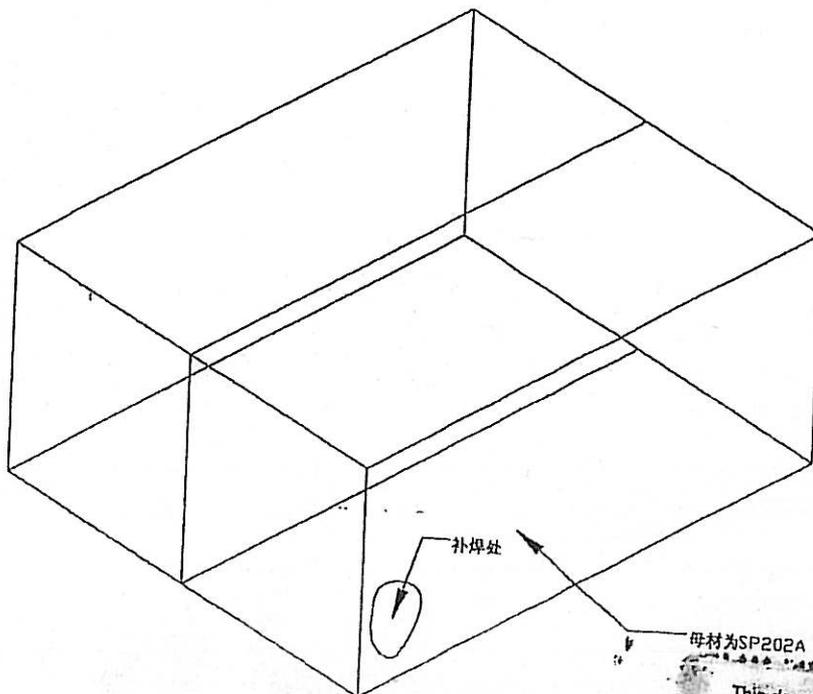
刘斌施工队制作的CB16横梁, 在临时构件割除后伤到了母材, 并且母材为FCM, 要进行补焊, 母材的编号为: SP202A.
 CB16 fabricated by work team: Liu Bin ,the base metal was gouged after removed temporary attachment and needed to build up, part No.:SP202A.

检验员 (Inspector):

ZHENGZHIWEI日期(Date): 2010-1-5

焊缝返修位置示意图:

Draft of welding discontinuity:



#R787-QCP-900

母材为SP202A

This document is APPROVED
 State of California
 DEPARTMENT OF TRANSPORTATION
 Pursuant to Section 5-1.02 of the
 Standard Specifications

Initial: [Signature] Date: 1/29/10

产生原因:

Caused:

1. 碳刨时, 操作工操作失误, 吊耳拆除后, 母材损伤;
1. A gouging operated error and base metal was gouged after removed lifting.

处理意见

车间负责人(Foreman) *Huyuzhang*

日期(Date): 10.1.5

Disposition :

1. QC和CWI在整个修补过程中都应在场并指导以确保返修按照处理意见以及AWS D1.5要求进行;
 2. 按照焊接返修工艺规程(WPS)打磨缺陷区域至光滑;
 3. 准备一个正确的接头形式, 具体参见返修的WPS;
 4. 在NDT检测前口头通知QA。对返修区域作100%MT和100%VT检查;
 5. 如果仍发现有缺陷, 通过打磨的方法去除所有缺陷以确认缺陷完全被清除, 并重复第四步以确认缺陷完全被清除;
 6. 将杂物以及MT检测遗留的残留物清理干净;
 7. 根据批准的焊接返修工艺规程(WPS)进行预热及焊接;
 8. 将焊接区域打磨至与母材平齐;
 9. 在NDT检测前口头通知QA。对返修区域作100%MT和100%VT检查。
1. QC and CWI should be present to witness the repair, direct and supervise all repair operations during this repair to ensure the repair is per the disposition requirements, and the AWS D1.5 code requirements.
 2. Grind the repair area to a smooth finish according to the approved repair WPS.
 3. Prepare the joint according to the approved WPS.
 4. Notify QA verbally prior to NDT. Perform 100%MT and 100%VT of the repair area.
 5. Remove all defects by grinding to ensure all defects are completely removed if defects still exist, and repeat "step 4" to assure complete removal of all defects if necessary.
 6. Clean the repair area of all loose debris including MT powder.
 7. Preheat and weld according to the approved WPS.
 8. Grind the weld flush with base metal after welding.
 9. Notify QA verbally prior NDT. Perform 100%MT and 100%VT of the repair area.

This document is APPROVED
 State of California
 DEPARTMENT OF TRANSPORTATION
 Pursuant to Section 5-1.02 of the
 Standard Specifications
 Initial *[Signature]* Date: 1/28/10

工艺:
Technical engineer

Xin T. I. efery
2010.01.28

审核:

Approved by *Luyankun*

日期

Date 1/28/10



关键性焊缝返修报告

版本 Rev. No.

1

Welding Repair Report

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	SP202A	报告编号 Report No.	B-CWR1040
合同号 Contract No.:	04-0120F4	部件名称 Items Name	CB16横梁 CB16 Beam	NDT报告编号 Report No. of NDT	
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective action to prevent re occurrence;

1. 培训和教育碳刨工, 提高碳刨质量;
2. 碳刨时, QC负责人在现场监控.
1. Train and educate/instruct the gouger to improve gouging quality;
2. Greater QC presence during gouging operations.

车间负责人(Foreman):

Huyuzhang

日期(Date): 2010.1.5.

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G3F)-FCM-Repair	工艺员 technologist	Xiu Tiejeng Jan 01.28
返修(碳刨)前预热温度 Preheat temperature before gouging	NA	返修的缺陷 Description of discontinuity	割伤.
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	185
最大碳刨深度 Max. depth of gouging	NA	碳刨总长 Total length of gouging	NA
焊工 welder	215248	焊接类型 welding type	SMAW
焊接电流 Current	210	焊接电压 Voltage	25-5
		焊接位置 position	3G
		焊接速度 Speed	110

返修后检查:
Inspection After repairing:

外观检查 VT result	Acc	检验员 Inspector	F. Wen. Liu 08126531	日期 Date	2010 2.28
NDT复检 NDT result	Acc	探伤员 NDT person	Jim Jiem ting	日期 Date	2/28

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 Date: 1/29/10



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-19922 DATE日期 2010.02.28 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: CB16 STRUT CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4
 SP202A

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 , 2010
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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-345F2-X 14mm
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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			
NA				ACC.		after repaired

BASE METAL PER B-CWR1040

BLANK

EXAMINED BY 主探 <i>Km Ken King</i> 100228 LEVEL - II SIGN 签名 / DATE 日期	REVIEWED BY 审核 <i>Guo</i> 100228 LEVEL-II SIGN / DATE 日期
---	--

质量经理 / QCM 签字 SIGN / 日期 DATE	用户 CUSTOMER 签字 SIGN / 日期 DATE
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DEPARTMENT OF TRANSPORTATION

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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-000643**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 05-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0532**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: 23-Dec-2009**Description of Non-Conformance:**

During a random visual inspection of the Orthotropic Box Girder (OBG) Crossbeam CB16, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing Seismic Performance Critical Member (SPCM) base metal repairs on the Side Panel (SP) of Crossbeam CB16 without the Engineer's approval.

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-The weld number between the SP and BP is identified as: CB202A-016-005

-The WPS used was WPS-345-SMAW-3G (3F)-Repair.

Contractor's proposal to correct the problem:

Perform NDT required to verify weld quality.

Corrective action taken:

Contractor submitted post repair NDT documentation verifying said base metal repairs are 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.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer