

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-000562

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 22-Dec-2009

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

NCR #: ZPMC-0535

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Bikepath Cantilever Bracket-End Plates
Procedural	Procedural	Description:	

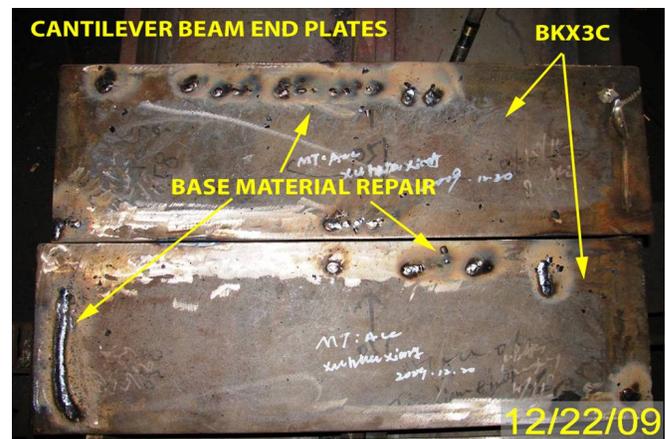
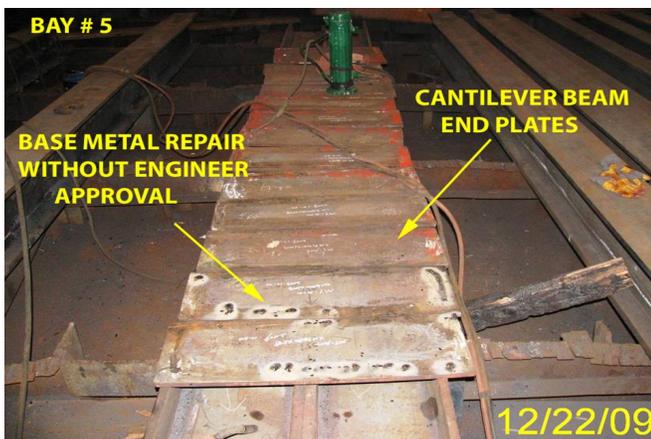
Reference Description: ZPMC performed base metal repairs without the prior approval of the Engineer on End Plates at OBG Sub-Assembly Bay 5

Description of Non-Conformance:

During random in-process visual inspection of the Orthotropic Box Girder (OBG) Bikepath Cantilever Bracket End Plates in fabrication Bay 5, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing base metal repairs on two (2) End Plates without the Engineer's approval.

-The End Plates are identified as: BKX3C

-The Welding Procedure Specification (WPS) used was WPS-345-SMAW-1G (1F)-Repair.



Applicable reference:

Special Provision 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 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."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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: Sandeep Kumar Naddi

Name of individual from Contractor notified: Wang Wen Bin

Time and method of notification: 1730 hours, 12-22-09, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1100 hours, 12-23-09, Verbal

QC Inspector's Name: Liu Fawen

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge

333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 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: 05.03.06-000523

Subject: NCR No. ZPMC-0535

Reference Description: ZPMC performed base metal repairs without the prior approval of the Engineer on End Plates at OBG Sub-Assembly Bay 5

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG **Lift:** N/A

Remarks:

During random in-process visual inspection of the Orthotropic Box Girder (OBG) Bikepath Cantilever Bracket End Plates in fabrication Bay 5, the Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel performing base metal repairs on two (2) End Plates without the Engineer's approval.

- The End Plates are identified as: BKX3C
- The Welding Procedure Specification (WPS) used was WPS-345-SMAW-1G (1F)-Repair.

Action Required and/or Action Taken:

For subsequent base metal repairs, notify the engineer prior to the start of work. Provide weld test information 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-0535

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000523

Subject: NCR No. ZPMC-0535

Dated: 17-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000625 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the base metal according to an approved CWR and is providing the NDT which was performed after to show that the base metal is sound. Based on this ZPMC requests closure of this NCR.

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Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000625R00;

Caltrans' comments:

Status: CLO

Date: 18-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 18-Mar-2010

Attachment(s):



No. B-689

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-17

REGARDING: NCR-000562(ZPMC-0535)

ZPMC is providing the CWR and NDT records show the base metal repair is acceptable. Based on this, ZPMC is requesting this NCR to be closed.

ATTACHMENT:

NCR-000562(ZPMC-0535)

B-CWR1012

B787-MT-17283

B787-UT-10487

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

3/17/10



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
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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

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Attachments: ZPMC-0535

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

File: 05.03.06

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China **Report No:** NCR-000562
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 22-Dec-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0535

Type of problem:

- Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** Bikepath Cantilever Bracket-End Plates
 Procedural Procedural **Description:**

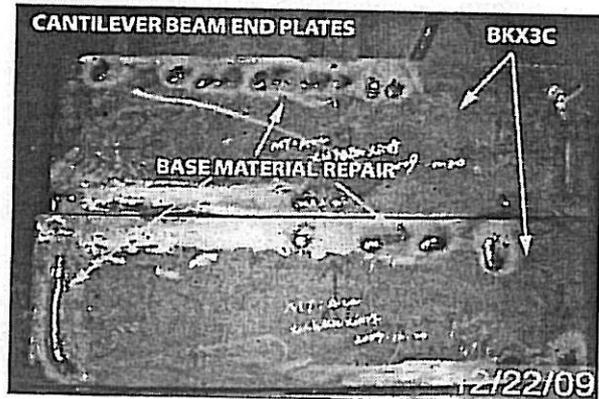
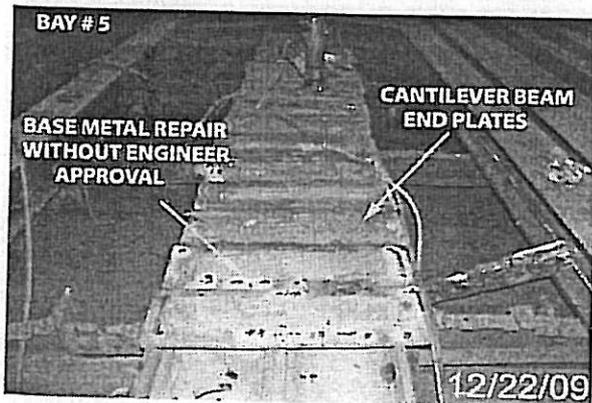
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon, Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh, Mazen

SMR

2011 - 335



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

版本
Rev. No.:
①

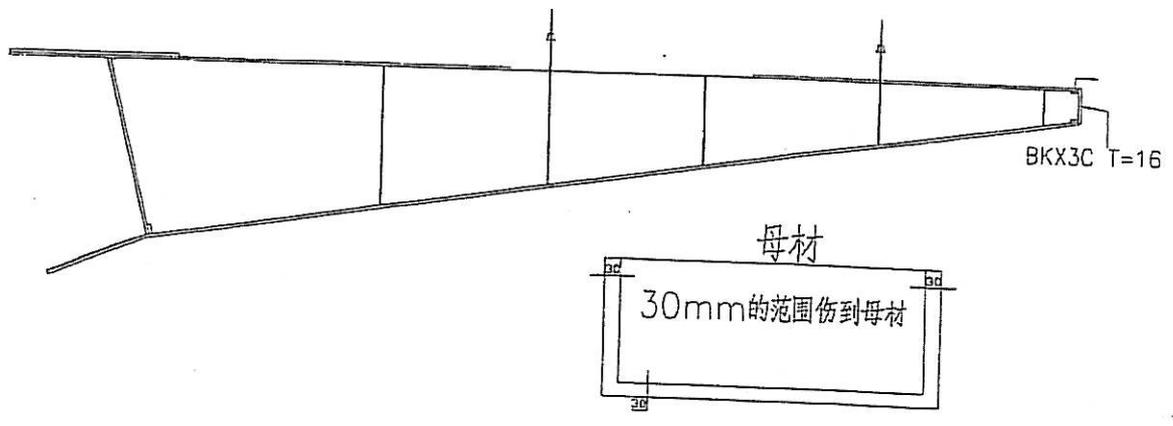
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	BK1	报告编号 Report No.:	B-CWR1012
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	悬臂梁支架 Suspending bracket	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:
Description of Welding Discontinuity:
刘斌施工队制作的悬臂梁支架PP85-PP111(取奇数), 在去除前端的封板时伤到母材2-7mm不等。
Suspending bracket PP85-PP111(only including odd) fabricated by work team: Liu Bin, the base metal was gouged after removing seal plate, 2-7mm in depth.

检验员 (Inspector): Way Liang

日期 (Date): 2009-12-22

焊缝返修位置示意图:
Draft of Welding Discontinuity:



Base metal gouged 30mm in area.

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SKK Date: 12/25/09
BL WCH

产生原因:

Cause:

工人操作失误, 导致母材损伤。

Worker operated error caused base metal gouged.

车间负责人 (Foreman):

Zhang Guiming

日期 (Date): 09.12.22

处理意见

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工作顺利进行;
 2. 按照焊接返修工艺规程 (WPS) 打磨缺陷区域;
 3. 准备一个正确的接头形式, 具体参见返修的WPS;
 4. 对该区域作100%MT检查, 确保缺陷全部去除;
 5. 根据批准的焊接返修工艺规程 (WPS) 进行预热及焊接;
 6. 将焊接区域打磨至与母材平齐;
 7. 根据图纸要求进行相应的NDT(VT、MT 和UT)检测;
-
1. 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.
 2. Grind the repair area to a smooth finish according to the approved repair WPS.
 3. Prepare an right joint according to the approved WPS.
 4. Verify with MT and VT no defects remain in the repair area prior to welding;
 5. Preheat and weld according to the relevant WPS.
 6. Grind the weld flush with base metal after welding.
 7. Perform NDT inspection(VT、MT and UT) of the weld according to the working drawings.

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SFK Date: 12/25/15
BR WBA

工艺:

Technical Engineer: He Xiaolin

审核:

Approved By: Zhang Guiming

日期:

Date: 09.12.22

#R787-QCP-900



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.:	BK1	报告编号 Report No.:	B-CWR1012
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	悬臂梁支架 Suspending bracket	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, 提高操作水平。

Train and educate operator to improve operation skill.

车间负责人 (Foreman):

Zhang Guiming

日期 (Date):

09.12.22

参照的 WPS 编号 Repair WPS No.:	WPS-345-SMAW-1G(1F)-Repair	工艺员 Technologist:	He Xiaolin 09.12.22
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	NA	返修的缺陷 Description of Discontinuity:	NA
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	174
最大碳刨深度 Max. Depth of Gouge:	NA	碳刨总长 Total Length of Gouge:	NA
焊工 Welder:	215248	焊接类型 Welding Type:	SMAW
焊接电流 Current:	163	焊接电压 Voltage:	24.3
		焊接位置 Position:	1G
		焊接速度 Speed:	142
返修后检查 Inspection After Repair:			
外观检查 VT Result:	Acc	检验员 Inspector:	F.W. Lin 08.12.23
NDT 复检 NDT Result:	WT: Acc MT: Acc	探伤员 NDT Person:	Han Jiong Jim Jianting
日期 Date:		日期 Date:	09.12.30
日期 Date:		日期 Date:	12/30 09.12.31
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-10487 DATE 2010.01.03 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: OBG CANTILEVER BOX BRACKE DRAWING NO.: BK1(PP85-PP111) CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 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 SMAW JOINT TYPE 焊缝类型 NA CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST, 2010

EQUIPMENT 设备 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 IIV BLOCK TYPE II COUPLANT 耦合剂 C.M.C MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 30/16mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y			
BKX3C		70				32									ACC.	100%
		0				22									ACC.	100%

BASE METAL PER B-CWR1012

BLANK

EXAMINED BY 主探 Han Peng
 LEVEL - II SIGN / DATE 10.01.03

质量经理 / QCM Li Shimhua 2010.1.8
 签字 SIGN / 日期 DATE

REVIEWED BY 审核 Su wei
 LEVEL - II SIGN / DATE 10.01.03

用户 CUSTOMER _____
 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
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(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-000610**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0535**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: 22-Dec-2009**Description of Non-Conformance:**

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-The Welding Procedure Specification (WPS) used was WPS-345-SMAW-1G (1F)-Repair.

Contractor's proposal to correct the problem:

Submit CWR for Engineer's approval and perform NDT required to verify weld quality.

Corrective action taken:

Contractor submitted CWR for approval along with subsequent NDT documentation confirming the 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 152.1675.3703, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer