

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-000828

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 28-Aug-2010

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

NCR #: ZPMC-0790

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower Lift 2 Skin B
Procedural	Procedural	Description:	

Reference Description: West Tower Lift 2: Missed MT Crack on Skin B

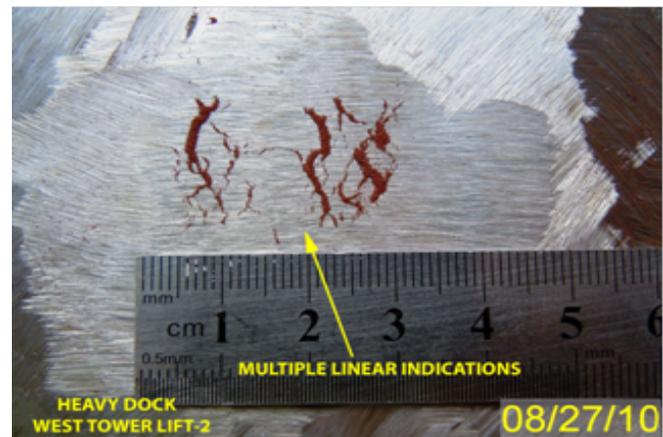
Description of Non-Conformance:

During Magnetic Particle Testing (MT) review of outstanding items on West Tower Lift-2, this Quality Assurance Inspector (QA) discovered the following issue:

- Cracks found on base material of Skin 'B' external side.
- Location: West Tower Lift-2 Skin 'B', 4380 mm from top of the tower and 560 mm from Skin B/C corner.
- This member is Non-Seismic Performance Critical Member (non SPCM).
- This member is located at the Heavy Dock area.

The Notice of Witness Inspection Number (NWIT) is 006494. These cracks are located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 100% MT inspection of these welds.

For further information, please see the attached photos and applicable reference below.



Applicable reference:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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: Naddi Sandeep Kumar

Name of individual from Contractor notified: Kim Xiao

Time and method of notification: 1630 hours/ 08/27/10/ Verbal

Name of Caltrans Engineer notified: Jim Reid

Time and method of notification: 1312 hours/ 08/30/10/ Verbal

QC Inspector's Name: Sun Zi Wang

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

Inspected By: Ng,Michael

QA Inspector

Reviewed By: Devey,Jim

SMR

NCT

(Continued Page 2 of 2)

Transmitted by: Gina Rizzardo Transportation Engineer

Attachments: ZPMC-0790

cc: Rick Morrow, Gary Pursell, Mark Woods

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000785

Subject: NCR No. ZPMC-0790

Dated: 02-Sep-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000760 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the indications and is providing the repair report and NDT performed after to show it is acceptable.

ZPMC has repaired the indications and is providing the repair report and NDT performed after to show it is acceptable. To address the missed indications in the tower, ZPMC and ABFJV have combined resources to ensure inspections are performed in a timely but complete way. This merger is underway and the change should decrease the number of missed indications along with the refresher training that ZPMC conducts. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000760R00

Caltrans' comments:

Status: AAP

Date: 12-Sep-2010

This proposed resolution is accepted with action pending. This NCR will be considered closed once the proper NDT documentation is submitted and reviewed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 12-Sep-2010

NCR PROPOSED RESOLUTION

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

Dated: 15-Sep-2010

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

Attention: Siegenthaler, Peter
Resident Engineer

Job Name: SAS Superstructure

Ref: 05.03.06-000785

Document No.: ABF-NPR-000760 Rev: 01

Subject: NCR No. ZPMC-0790

Contractor's Proposed Resolution:

Reference Resolution: Proper NDT documentation attached
Proper NDT documentation attached

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000760R01;

Caltrans' comments:

Status: CLO

Date: 15-Sep-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0790 is closed.

Submitted by: Eagen, Sean

Date: 15-Sep-2010

Attachment(s):



No. T-158

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-09-01

REGARDING: NCR-000828(ZPMC-0790)

ZPMC received NCR-000828(ZPMC-0790), it all mentioned that CT inspectors found indications on metal surface.

ZPMC realized this problem, and put forward T-WR3524 at the first time for repairing. Finally the repair area was fixed and checked by MT. Also it was re-inspected and accepted by CT inspector. Here attached the related documents to prove the area is sound after repairing.

ZPMC also inculcated the NDT personal and give them necessary training to enhance the management and their performance in the future.

Basing on above information, ZPMC hope CT could take a review and close the NCR.

ATTACHMENT:

NCR-000828(ZPMC-0790)

T-WR3524 R0

T787-MT-10887

Zhang Zidong

2010 9.01

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-000828

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 28-Aug-2010

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

NCR #: ZPMC-0790

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

Bridge No: 34-0006

Component: West Tower Lift 2 Skin B

Reference Description: West Tower Lift 2: Missed MT Crack on Skin B

Description of Non-Conformance:

During Magnetic Particle Testing (MT) review of outstanding items on West Tower Lift-2, this Quality Assurance Inspector (QA) discovered the following issue:

-Cracks found on base material of Skin 'B' external side.

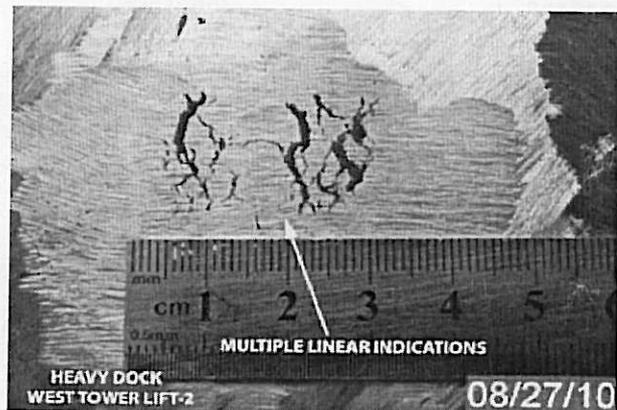
-Location: West Tower Lift-2 Skin 'B', 4380 mm from top of the tower and 560 mm from Skin B/C corner.

-This member is Non-Seismic Performance Critical Member (non SPCM).

-This member is located at the Heavy Dock area.

The Notice of Witness Inspection Number (NWIT) is 006494. These cracks are located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 100% MT inspection of these welds.

For further information, please see the attached photos and applicable reference below.



Applicable reference:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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: Naddi Sandeep Kumar

Name of individual from Contractor notified: Kim Xiao

Time and method of notification: 1630 hours/ 08/27/10/ Verbal

Name of Caltrans Engineer notified: Jim Reid

Time and method of notification: 1312 hours/ 08/30/10/ Verbal

QC Inspector's Name: Sun Zi Wang

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

Inspected By: Ng, Michael

QA Inspector

Reviewed By: Devey, Jim

SMR



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SA384	报告编号 Report No.	T-WR3524
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西塔二吊B面板 Tower(W) 2 nd lifting Skin B	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

缺陷描述

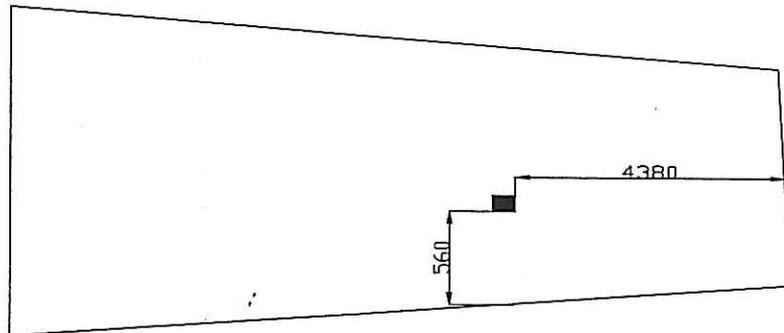
Description of welding discontinuity:

西塔二吊B面板在报加州冲砂后的返修点时发现一裂纹，长30mm宽10mm深5mm具体如图：
West tower 2nd lifting Skin B, the crack was found after sanding; 30mm in length, 10mm in wide, 5mm in depth, and the details sees the following draft.

检验员 (Inspector): Sun ziwang 日期(Date): 2010.08.27

焊缝返修位置示意图:

Draft of welding discontinuity:



注：阴影处为需要补焊区域。

Remark: repair area in shadow.

产生原因:

Caused:

1. 火焰加热时, 水汽没有完全的去掉或者这个区域预热不够;
1. Moisture wasn't completely removed during drying operation (preheating) or the area wasn't preheated sufficiently.

车间负责人(Foreman):

Li Shiguan

日期(Date):

8-28

处理意见

Disposition :

- 1、 Grind smoothly the defect area
- 2、 If User's request ,check with VT or other NDT method to make sure the defect remove completely;
- 3、 Preheat and weld passes temperature according to the approved WPS, it should be 2-3mm than the theory size;
- 4、 Grind the weld area smoothly;
- 5、 Perform NDT of the repair area.

- 1、 请将有缺陷的部分打磨光滑
- 2、 如用户要求, 用 VT 或其它的无损检测方法证实缺陷被完全清除;
- 3、 按批准后焊接工艺规程 WPS 要求进行预热和控制道间温度, 进行堆焊, 略高于理论值 2~3mm;
- 4、 施焊完毕后将施焊位置打磨平整;
- 5、 对返修区域作 NDT 检查。

工艺: *Li Jun*
Technical engineer

审核:
Approved by *W. J. ...*

日期
Date

10-8-28



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	SA384	报告编号 Report No.	T-WR3524
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西塔二吊B面板 Tower(W) 2 nd liftin g Skin B	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1.返修前, QC确认有效的预热, 以将水汽全部去除。

1. QC shall verify sufficient preheat has been applied, to remove moisture, prior to welding.

车间负责人(Foreman):

Lishiguan

日期(Date):

8.28

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1G(1F)-Repair WPS-345-SMAW-2G(2F)-Repair WPS-345-SMAW-3G(3F)-Repair WPS-345-SMAW-4G(4F)-Repair	工艺员 technologist	Li Jun 8.28
返修(碳刨)前预热温度 Preheat temperature before gouging	NA	返修的缺陷 Description of discontinuity	线性缺陷
焊前处理检查 Inspection before welding	打磨光滑方法	焊前预热温度 Preheat temperature before welding	200
最大碳刨深度 Max. depth of gouging	5	碳刨总长 Total length of gouging	30
焊工 welder	049220	焊接类型 welding type	SMAW
		焊接位置 position	2G
焊接电流 Current	165	焊接电压 Voltage	22
		焊接速度 Speed	98

返修后检查

Inspection After repairing:

外观检查 VT result	Acc	检验员 Inspector	zhao chen sun 07072091	日期 Date	2010. 8. 28
NDT复检 NDT result	Acc	探伤员 NDT person	cai xin xin	日期 Date	2010. 8. 28

见证:

Witness/Review:

备注:

Remark:



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-10887 DATE日期 2010.08.28 PAGE OF页码 1/1 Revision No: 0

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

DRAWING NO. SA384 CALTRANS CONTRACT NO.:
 图号: THE SECOND LIFTING TOWE (W) 加州工程编号 04-0120F4

REFERENCING CODE ACCEPTANCE STANDARD PROCEDURE NO. CALIBRATION DUE DATE
 参考规范编码 接受标准 程序编号 仪器校正有效期
 AWS D1.5-2002 AWS D1.5-2002 ZPQC-MT-01 Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 连续编号
 MT YOKE PARKER B310S 17368

MAGNETIZING METHOD Continuous magnetic yoke CURRENT
 磁化方法 磁轭式连续法 电流 AC

PARTICLE TYPE Dry magnet powder YOKE SPACING
 磁粉类型 干磁粉 磁轭间距 70~150mm

MATERIAL TO BE √ WELDING 焊接件 Material & thickness A709M-345T2-Z
 EXAMINED □ CASTING 铸件 母材,厚度
 检测材料 □ FORGING 锻造 30/10mm

WELDING PROCESS NA TYPE OF JOINT NA
 焊接方法 焊缝类型

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			
SA384				ACC.		100%MT

BASE METAL PER T-WR3524

BLANK

EXAMINED BY 主探 Cai Xinxin <i>Cai Xinxin</i> LEVEL - II SIGN 签名 / DATE日期 2010.08.28 质量经理 / QCM <i>W. Parker</i> 2010.8.28 签字 SIGN / 日期 DATE	REVIEWED BY 审核 <i>Ku Bin</i> LEVEL-II SIGN / DATE日期 2010-08-28 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
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-000794**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0790**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: 28-Aug-2010**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) review of outstanding items on West Tower Lift-2, this Quality Assurance Inspector (QA) discovered the following issue:

- Cracks found on base material of Skin 'B' external side.
 - Location: West Tower Lift-2 Skin 'B', 4380 mm from top of the tower and 560 mm from Skin B/C corner.
 - This member is Non-Seismic Performance Critical Member (non SPCM).
 - This member is located at the Heavy Dock area.
- The Notice of Witness Inspection Number (NWIT) is 006494. These cracks are located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 100% MT inspection of these welds.

Contractor's proposal to correct the problem:

Contractor will repair missed cracks and provide NDT documentation of repaired areas. Contractor also will provide NDT training to improve QC procedures.

Corrective action taken:

Contractor repaired cracks noted and provided NDT documentation showing welds are now in compliance with contract requirements. NDT training to improve QC performance has been conducted by the Contractor.

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

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Devey,Jim

QA Reviewer