

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 #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China**Report No:** NCR-000649**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0620**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: South Tower Lift 4
Procedural	Procedural	Description:	

Reference Description: Excessive Weld Pass Width, South Tower Lift 4, Weld #SSTL4-1K/L-96**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of South Tower Lift 4, A/E corner backfill plate at 143m top diaphragm, this QA inspector discovered the following issue:

- Excessive weld pass width.
- The width of a single weld pass measured to be approximately 32mm and the length of weld pass measured to be approximately 480mm.
- This Flux Core Arc Weld (FCAW) is a Partial Joint Penetration (PJP) groove weld performed in the vertical position.
- The maximum FCAW weld pass width allowed in vertical position for groove weld is 25mm.
- The weld is identified as: SSTL4-1K/L-96.
- The weld is joining the Backfill plate and skin E of South Tower Lift 4.
- The material is designated as non Seismic Performance Critical Member (non SPCM).
- The member is located in Bay 10

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5 Section 4.14.1.5 FCAW: "When welding in the vertical position, a split-layer technique shall be used when the width of the layer exceeds 25 mm [1 in]."

Who discovered the problem: Umesh D. Gaikwad

Name of individual from Contractor notified: Yang Yi Heng

Time and method of notification: 1430 Hrs, 01/24/10, Verbal

Name of Caltrans Engineer notified: Ken Lee

Time and method of notification: 1000 Hrs, 01/25/10, Verbal

QC Inspector's Name: Li Peng Fei

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 Skyler Guest, 15000422360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
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Reviewed By:	Wahbeh, Mazen	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
 333 Burma Road
 Oakland CA 94607
 Tel: 510-808-4618 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 25-Jan-2010

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: 05.03.06-000604

Subject: NCR No. ZPMC-0620

Reference Description: Excessive Weld Pass Width/ South Shaft Lift 4/ A/E Corner Backfill Plate

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: Tower **Lift:** 04

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of South Tower Lift 4, A/E corner backfill plate at 143m top diaphragm, this QA inspector discovered the following issue:

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AWS D1.5 Section 4.14.1.5 FCAW: "When welding in the vertical position, a split-layer technique shall be used when the width of the layer exceeds 25 mm [1 in]."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the welds placed are in compliance with the contract requirements. In addition to the material/workmanship non-conformance, propose a resolution that addresses the failure of Quality Control to identify the excessive weld pass width. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

NCT

(Continued Page 2 of 2)

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0620

cc: Rick Morrow, Gary Pursell, Mark Woods, Scott Kennedy

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000604

Subject: NCR No. ZPMC-0620

Dated: 26-Apr-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000647 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has issued an internal NCR and is providing NDT documents to show the weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has issued an internal NCR and is providing NDT documents to show the weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000647R00;

Caltrans' comments:

Status: CLO

Date: 02-May-2010

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-620 is closed.

Submitted by: Lee, Ken

Date: 02-May-2010

Attachment(s):



No. T-135

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-4-23

REGARDING: NCR-000649(ZPMC-0620)

ZPMC received NCR-000649(ZPMC-0620), it mentioned that CT inspector observed ZPMC welding personnel performed excessive weld pass width on SSSL4-1K/L-96.

As soon as reminded by CT site inspector, ZPMC personnel stopped welding immediately and removed the excessive width weld pass. In order to impress and warn ZPMC site worker deeply, ZPMC had issued internal NCR-T-062. The foreman and related welder had already been inculcated to behave better in the future. As a result, the weld was checked by both ZPMC and AB/F, and finally green tagged by CT. Here attached the NDT report to show the weld is sound.

So ZPMC hope CT could take a review and close this NCR.

ATTACHMENT:

NCR-000649(ZPMC-0620)

NCR-T-062

T787-MT-8677

Zhang T. Wang

2010.4.23



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-8677 DATE日期 2010.04.22 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: SSSL4-1I/L(1K/L) TOWER(S) FOURTH LIFTING DIAPHRAGM 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, 2010

EQUIPMENT 设备: MT YOKE MANUFACTURER 制造商: PARKER MODEL NO. 样式编号: B310S SERIAL NO. 连续编号: 5620 5395 5617

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-345TZ-2 A709M-HPS-485TZ-2 75 mm

WELDING PROCESS 焊接方法: FCAW SMAW TYPE OF JOINT 焊缝类型: T JOINT/BUTT

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			
SSSL4-1I/L-96				ACC.		100%MT
SSSL4-1K/L-96				ACC.		100%MT

BLANK

EXAMINED BY主探 <u>Xu Bing Xu Bing</u> LEVEL - II SIGN 签名 / DATE日期 <u>2010.04.22</u> 质量经理 / QCM	REVIEWED BY 审核 <u>Cai Xinlin</u> LEVEL-II SIGN / DATE日期 <u>2010.04.22</u> 用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000649**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0620**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:**Bridge No:** 34-0006**Component:** South Tower Lift 4**Reference Description:** Excessive Weld Pass Width, South Tower Lift 4, Weld #SSTL4-1K/L-96**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of South Tower Lift 4, A/E corner backfill plate at 143m top diaphragm, this QA inspector discovered the following issue:

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- The width of a single weld pass measured to be approximately 32mm and the length of weld pass measured to be approximately 480mm.
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- The maximum FCAW weld pass width allowed in vertical position for groove weld is 25mm.
- The weld is identified as: SSTL4-1K/L-96.
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- The member is located in Bay 10

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5 Section 4.14.1.5 FCAW: "When welding in the vertical position, a split-layer technique shall be used when the width of the layer exceeds 25 mm [1 in.]."

Who discovered the problem: Umesh D. Gaikwad

Name of individual from Contractor notified: Yang Yi Heng

Time and method of notification: 1430 Hrs, 01/24/10, Verbal

Name of Caltrans Engineer notified: Ken Lee

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QC Inspector's Name: Li Peng Fei

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

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Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR



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-T-062(ZPMC-0620)

Item: Excessive weld pass width
 名称描述: 焊道宽度过宽

Item Number:
 件号:
 Lift 4 South tower
 AE corner backfill
 plate

Drawing: 图号:
 SSTL4-1K/L-96

Location: bay 10
 位置: 10# 车间

Date:
 日期: 2010-01-26

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

During in-process visual inspection of South Tower Lift 4 AE corner backfill plate at 143m top diaphragm, CT inspector discovered the following issue:

-Excessive weld pass width.

-The width of a single weld pass measured to be approximately 32mm and the length of weld pass measured to be approximately 480mm.

-This Flux Cored Arc Weld is a Partial Joint Penetration groove weld performed in the vertical position.

The maximum FCAW weld pass width allowed in vertical position for rove weld is 25mm.

-The weld is identified as: SSTL4-1K/L-96.

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加州检验员发现南塔第四吊装段 AE 角 143m 隔板处补块焊缝 SSTL4-1K/L-96 焊道过宽。此处为 FCAW 立焊, 根据 AWS 要求最大宽度不得超过 25mm, 但现场实测为 32mm。而根据 AWS D1.5 规定, 如果盖面焊层宽度超过 25mm 时, 必须采用多道、错层焊技术。

Work By:

施工方:

Prepared by: Zhang Jindong

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

Disposition:

处理措施:

Use as is

回用

Repair

返修

Reject

拒收

①针对超宽焊缝进行了打磨处理至规定范围

Recommendation:

建议:

Prepared by: _____ Approved by QCA: _____

准备

质量经理批准

Reason for Nonconformance:

不符合原因:

①. 由于焊工王桂军(67275)焊接作业时操作失误, 导致焊缝烧宽.

Improper operation and uncomformance with AWS caused this problem.

Prevention of Re-occurrence:

预防措施:

①. 针对该焊工进行了经济处罚处理
Educate the welder to be more careful.

②. 加强焊缝焊接过程中的控制
Enhance the management during welding.

Approved by/批准: Lu Kofei 2010.2.7

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: _____

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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-000620**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 04-May-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0620**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: 24-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of South Tower Lift 4, A/E corner backfill plate at 143m top diaphragm, this QA inspector discovered the following issue:

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Contractor's proposal to correct the problem:

Verify weld integrity with NDT.

Corrective action taken:

MT (T787-MT-8677) was performed and the weld was found to be acceptable.

Did corrective action require Engineer's approval? Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?**

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Yes No

Comments:

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Inspected By:	Guest, Skyler	Quality Assurance Inspector
Reviewed By:	Wahbeh, Mazen	QA Reviewer
