

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, PRC

Report No: NCR-000319

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Jun-2009

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

NCR #: ZPMC-0293

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower, Lift 1
Procedural	Procedural	Description: Missed MT indications on West Tower, Lift 1	

Reference Description: Missed MT indications on West Tower, Lift 1 access portal doubler plate

Description of Non-Conformance:

QA discovered two linear indications, 15mm and 12mm in length, during random Magnetic Particle Testing (MT) of Lift 1, West Tower, Skin E, access portal doubler plate weld WSD1-SA225A/H-10. This weld was previously tested and accepted by ZPMC QC MT Technicians.



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 D1.5-2002 Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Umesh Gaikwad

Name of individual from Contractor notified: You Yuan Mao

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 6/14/09, 21:45; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 6/15/09, 8:00; Verbal

QC Inspector's Name: Ma Qian Li

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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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: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV **Date:** 15-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:** 05.03.06-000282
Subject: NCR No. ZPMC-0293

Reference Description: Linear Indication (MT) / West Shaft Lift 1 / Doubler Plate Weld

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:** 01

Remarks:

QA discovered two linear indications, 15mm and 12mm in length, during random Magnetic Particle Testing(MT) of Lift 1, West Tower, Skin E, access portal doubler plate weld WSD1-SA225A/H-10. This weld was previously tested and accepted by ZPMC QC MT Technicians.

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 D1.5-2002 Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance that addresses the failure of Quality Control to identify the linear indication (MT). Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

In addition to the Quality Control failure, propose a resolution for the identified material/workmanship non-conformance, documenting that the repaired weld is in compliance with the contract requirements.

Recent failures by Quality Control to identify linear indications have resulted in the issuance of NCR ZPMC-0212, ZPMC-0216, ZPMC-0231, ZPMC-0223, ZPMC-0234, ZPMC-0235 and ZPMC-0291 related to Tower and ZPMC-0244, ZPMC-0245, ZPMC-0258, ZPMC-0278, ZPMC-0279, ZPMC-0281, ZPMC-0285, ZPMC-0289 and ZPMC-0290 related to OBG.

Transmitted by: Scott Kennedy Sr. Bridge Engineer
Attachments: ZPMC-0293

NCT

(Continued Page 2 of 2)

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000282

Subject: NCR No. ZPMC-0293

Dated: 14-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000294 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has provided an internal NCR to identify this nonconformance as well as providing all relative inspection documentation. ZPMC requests closure of this NCR.

ZPMC has provided an internal NCR to identify this nonconformance as well as providing all relative inspection documentation. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000294R00;

Caltrans' comments:

Status: CLO

Date: 21-Aug-2009

The proposed resolution is acceptable. The weld in question has been accepted by MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0293 is closed.

Submitted by: Wright, Doug

Date: 21-Aug-2009

Attachment(s):



No. T-047

LETTER OF RESPONSE

TO: American Bridge/Flour JV

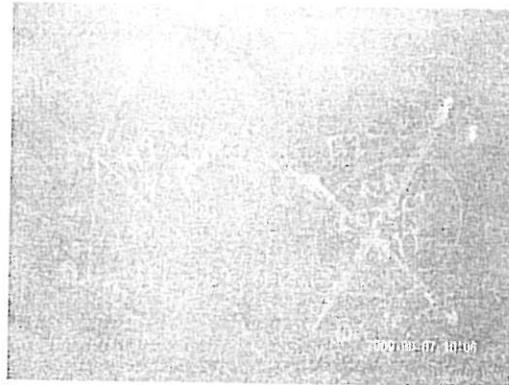
DATE: 2009-8-8

REGARDING: NCR-000319, ZPMC-0293

ZPMC received a NCR it mentioned that QA discovered two linear indications, 15mm and 12mm in length, during random MT of lift 1 ,west tower skin E access portal doubler plate weld WSD1-SA225A/H-10.This weld was previously tested and accepted by ZPMC QC MT technicians.

About this situation When the CT people Umesh Gaikwad found these problems ,our zpmc people at the first time removed the linear indications which is allowed by this guy. Then Umesh Gaikwad to make sure remove the linear indications with the MT method. Because it happened at the nightshift ,so the second day our people did the repair work ,then our MT guy did the MT again about the problem area to make sure no problem then CT people B281 conformed that and accepted the welds.

So ZPMC hope CT people close this NCR.



ATTACHMENT:

INTERNAL NCR-T-048(ZPMC-0293)

NCR-00319(ZPMC-0293)

REPORT OF MAGNETIC PARTICLE EXAMINATION:T787-MT-5369

NDT INSPECTION NOTIFICATION SHEET:003422

Li Xinyang
09.8.8



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-048(ZPMC-0293)
Item: miss MT indication 名称描述: MT 漏检	Item Number: 件号: West tower lift 1skin E doubler plate welds	Drawing: 图号: WSD1-SA225A/H-10
Location: bay 11 位置: 11 车间	Date: 日期: 2 009-06-17	

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

QA discovered two linear indications, 15mm and 12mm in length, during random Magnetic Particle Testing (MT) of lift 1 west tower, skin E, access portal doubler plate welds WSD1-SA225A/H-10. This weld was previously tested and accepted by ZPMC QC MT Technicians.

AWSD1.5-2002 Section 6.26.2 "Welds that are subject to MT in addition to visual inspection shall have no cracks."

加州检验员在进行西塔第一吊装段 E 面板上双层板 MT 最终检测的时候, 发现焊缝编号为 WSD1-SA225A/H-10 的这条焊缝有 15 毫米, 以及 12 毫米两处裂纹, 但是此焊缝我们 ZPMC 已经接收。

根据 AWSD1.5-2002 中 6.26.2 中说, 除了目检之外进 MT 检测的焊缝严禁有裂纹。

Work By: L.L. Wang P prepared by: L. Xin Jiang
 施工方: 2009.6.17 准备: 09.6.17 Reviewed by QCE: Zhao Shuang
 质量工程师批准: 09.6.17

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: 重新检测该部位, 返修.

Prepared by: L.L. Wang Approved by QCA: _____
2009.6.17

准备

质量经理批准

Reason for Nonconformance:

不符合原因:

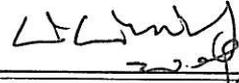
线性缺陷没有被检测到..

Prevention of Re-occurrence:

预防措施:

加强现场检测, 加强复检..

Approved by/批准:

 16.2

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:

#R787-QCP-1300

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Location: Changxing Island, Shanghai, PRC

Report No: NCR-000319

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Jun-2009

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

NCR #: ZPMC-0293

Type of problem:

Welding Concrete Other Welding Curing Procedural

Bridge No: 34-0006

Joint fit-up Coating Other

Component: West Tower, Lift 1

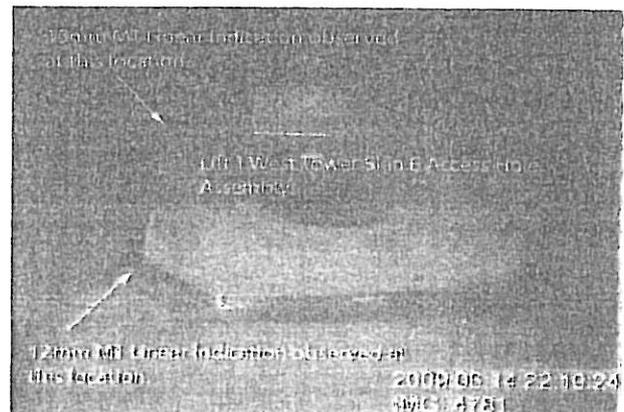
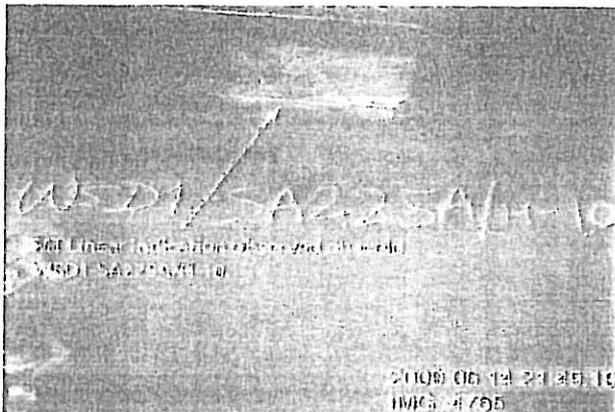
Procedural Procedural

Description: Missed MT indications on West Tower, Lift 1

Reference Description: Missed MT indications on West Tower, Lift 1 access portal doubler plate

Description of Non-Conformance:

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AWS D1.5-2002 Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Umesh Gaikwad

Name of individual from Contractor notified: You Yuan Mao



NDT客户检验通知单
NDT Inspection Notification Sheet

中请递交时间:
Submit time:
2009-6-14 18:30

文件编号:003422
Document No.

Shift	序号 No	检验内容 Inspection	待检验构件 Inspection part	产品分类 Section	检验场地 Inspection Place	计划检验时间 Inspection Time
DAY AFTER NOON SHIFT	1	final vt, mt for welds	wsd1-sa225f/h-25, 26, 31, 32, 36, 41, 42, 46, 47, 52, 53, 56	lift I west tower skin e bearing plate	bay 11	2009-6-14 19:30 for green tag
	2	final vt, mt for welds	wsd1-sa225a/h-10, 12, 1, 4, 6, 13	lift I west tower skin e access hole assembly	bay 11	2009-6-14 19:30 for green tag
	3	final vt, mt for welds	wsd1-sa225g/h-3, 4	lift I west tower skin e access hole assembly	bay 11	2009-6-14 19:30 for green tag
	4					
	5					
	6					

备注:
Note:

- 1、见证通知发出后, 现场等待时间通常不超过30分钟; 如有变动, 现场通知。
1、When ZPMC give this table to Caltrans, Zpmc will do the inspection in 30 minutes. If we change the plan, we will inform Caltrans in the shop. 联系人: Requested By:
- 2、ZPMC根据自己的检验控制点 (HOLD POINT) 进行日常检验。
2、ZPMC will do any inspection according to the HOLD POINT. CT签收人: CT Receiver:
- 3、此单为临时试用单, 仅适用于完工焊缝的NDT检验见证通知。
3、This table is a temporary one, just for final NDT inspection notification.

- 4、QC检验完成后, QA是否需要复验, 由QA自行决定, QC不再另行通知。复验等待时间通常为24小时。
4、When ZPMC QC finish NDT inspection, Caltrans QA can decide if they want to retest it. ZPMC QC will not inform Caltrans again. The waiting time is 24 hours ordinarily.

- 5、具体焊缝编号请查看附页。
5、The weld ID is on the attachment.

签收时间:
Time:

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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, PRC**Report No:** NCS-000288**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0293**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: 14-Jun-2009**Description of Non-Conformance:**

QA discovered two linear indications, 15mm and 12mm in length, during random Magnetic Particle Testing (MT) of Lift 1, West Tower, Skin E, access portal doubler plate weld WSD1-SA225A/H-10. This weld was previously tested and accepted by ZPMC QC MT Technicians.

Contractor's proposal to correct the problem:

Repair affected weld.

Corrective action taken:

The affected weld has been repaired and a NDT report indicating a sound weld has been submitted. The weld has been verified by QA and green tagged.

To resolve the recurring failure for QC to detect MT indications, ABF has held verbal interviews with ZPMC QC and MT technicians on several occasions. ABF has requested ZPMC to provide an analysis of missed indications to determine if they can be traced to a personnel trend, such as an inspector, welder, or weld location. ABF has also informed ZPMC to ensure adequate lighting is provided during inspections. Tests have also been administered to ZPMC MT technicians to demonstrate their ability to detect MT indications.

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod, Serge

Quality Assurance Inspector

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Reviewed By: Wahbeh,Mazen

QA Reviewer