

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-000499

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 29-Oct-2009

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

NCR #: ZPMC-0472

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG 6CW weld # DP275A-066
Procedural	Procedural	Description: Missed MT indication by QC	

Reference Description: Longitudinal indications discovered in Segment 6CW inside Cope Holes with MT after the contractor's acceptance

Description of Non-Conformance:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length.

This weld was previously tested and accepted by ZPMC QC MT.



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 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Hiranch Patel

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1000 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Lay Tao

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: 11-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: 05.03.06-000462

Subject: NCR No. ZPMC-0472

Reference Description: Longitudinal indications discovered in Segment 6CW inside Cope Holes with MT after the contractor's acceptance

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:** 06

Remarks:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length. This weld was previously tested and accepted by ZPMC QC MT.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Missed MT indications have become a chronic problem. Ensure that adequate training of MT technicians is performed to lessen these occurrences.

Transmitted by: Bill Howe

Attachments: ZPMC-0472

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: 05.03.06-000462

Subject: NCR No. ZPMC-0472

Dated: 18-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000495 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster. The ABF QCM has been discussing missed MT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. Preliminary findings have resulted in ZPMC taking immediate action by performing 100% overchecks of the previously tested areas beginning the week of 18 January 09 as a means of preventing future NCR's for missed indications. ABF has purchased powder dispensers for all the ZPMC MT technicians as a means to help control the amount of powder applied during MT testing. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000495R00;

Caltrans' comments:

Status: AAP

Date: 25-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

Submitted by: Chao, Ching

Date: 25-Jan-2010

Attachment(s):

Tool Box Training Agenda

Subject: MT Techniques

Reason for Training: Several CT NCR's of indications missed during ZPMC NDT inspection.

1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical shock

2. Tools

- a. Lighting
- b. MT Powder. Red for ambient, Yellow for High Temperature.
- c. Powder Bulb
- d. Powder Blower
- e. MT Yoke Adequate working condition
- f. Pie Gage

3. Inspection Techniques

- a. Lighting
- b. Position of body (distance of eyes to the weld surface)
- c. Application of Powder removal of Powder
- d. Continuous method
- e. Two directions
- f. Both sides of weld
- g. Clean and dry surface



教育培训纪录

培训编号: MT-22-Dec-09

培训内容:	MT Techniques
培训对象:	项目质检
授课人员:	Steve Lawton
培训类型:	内部培训
培训时间:	22-Dec-09 5:00 PM
计划培训地点:	ZPMC QC office

人员签到:

姓名	部门	姓名	部门
孙力杰 Sunlei	钢桥	狄坤龙 Di Kunlun	钢桥
孙广强 Sun Guangqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Chunqiang	钢桥
卞源源 Bian Yuanyuan	钢桥	顾云武 Gu Yunwu	钢桥
许兵 Xu Bing	钢桥	金建廷 Jin Jianting	钢桥 MT
李振华 Li Zhenhua	钢桥	常方杰 Chang Fangjie	钢桥
李坤阳 Li Xunyang	QA	袁俊 Yuan Jun	钢桥
王威 Wang Wei	钢桥	刘章敏 Liu Zhangmin	
孙林 Sun Lin	钢桥 MT	徐华祥 Xu Huaxiang	钢桥
丁阿成 Ding A Cheng	钢桥 MT	周东超 Zhou Dongchao	钢桥
贺佳佳 He Jiajia	钢桥	赵成功 Zhao Cheng Gong	钢桥
黄瑞 Huang Rui	钢桥	孙广强 Sun Guangqiang	钢桥
李黎明 Li Liming	钢桥	徐辉 Xu Hui	钢桥
李昌涛 Li Changtao		刘宏斌 Liu Hongbin	

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000462

Subject: NCR No. ZPMC-0472

Dated: 03-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000495 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indications present and retested the welds for acceptability. Attached is documentation showing the welds are sounds. Based on that ZPMC requests closure of this NCR.

ZPMC has repaired the missed indications present and retested the welds for acceptability. Attached is documentation showing the welds are sounds. Based on that ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000495R01;

Caltrans' comments:

Status: CLO
Date: 07-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Attachment(s):

Date: 07-Mar-2010



No. B-634

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-3

REGARDING: NCR-000499(ZPMC-0472)

With this letter of response, ZPMC requests closure of CT NCR-000499(ZPMC-0472) what mentioned that CT inspector observed missed MT indication by ZPMC QC.

- ZPMC acknowledged this problem and has issued internal NCR.
- CWR was issued to repair these indications. Please be noticed these two indications were located in one cope hole, so the CWR was issued with one indication. Please refer to B-CWR1066.
- Attached NDT documentation shows this indication was accepted after repair..
- Punch List Item 178 what mentioning this NCR has been confirmed and closed by CT.

Base on the taken actions and responses above, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000499(ZPMC-0472)

NCR-B-322(ZPMC-0472)

B787-MT-1783R1

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

3/3/10



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: 11-Dec-2009

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure
Document No: 05.03.06-000462

Subject: NCR No. ZPMC-0472

Reference Description: Longitudinal indications discovered in Segment 6CW inside Cope Holes with MT after the contractor's acceptance

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- 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: 06

Remarks:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length. This weld was previously tested and accepted by ZPMC QC MT.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Missed MT indications have become a chronic problem. Ensure that adequate training of MT technicians is performed to lessen these occurrences.

Transmitted by: Bill Howe

Attachments: ZPMC-0472

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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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-000499

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 29-Oct-2009

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

NCR #: ZPMC-0472

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description: Missed MT indication by QC

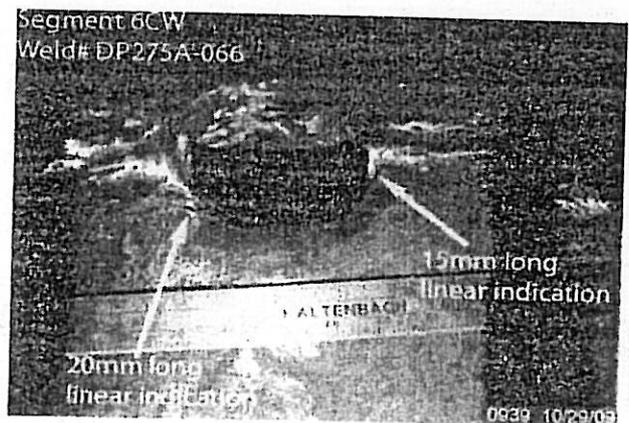
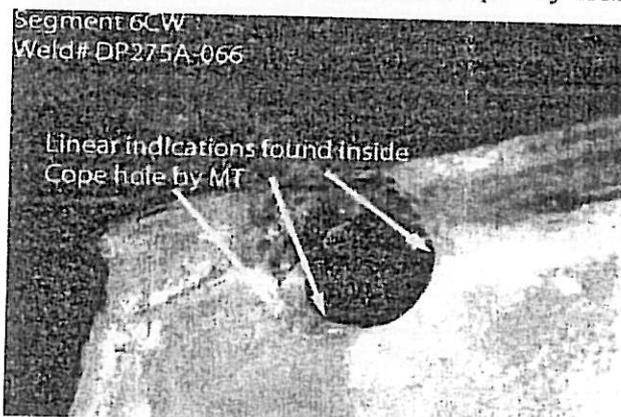
Bridge No: 34-0006

Component: OBG 6CW weld # DP275A-066

Reference Description: Longitudinal indications discovered in Segment 6CW inside Cope Holes with MT after the contractor's acceptance

Description of Non-Conformance:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length. This weld was previously tested and accepted by ZPMC QC MT.



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 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Hiranch Patel

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1000 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Lay Tao

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

CUR 4066, MT-17835-R1



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-B-322(ZPMC-0472)	
Item: Missed MT indication by QC 名称描述: MT 漏检		Item Number: 件号: OBG LIFT 12	Drawing: 图号: N/A
Location: Bay 2 位置: Trial Assembly Yard		Date: 日期: 2009-12-22	

Description of Nonconformance:

不符合项状态描述:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length.

This weld was previously tested and accepted by ZPMC QC MT.

在随机 MT 检验 6CW 时候, 加州检验员发现 2 条纵向缺陷在 DP275A-066 上的额过焊孔里。两条缺陷测得长度约为 15mm 和 20mm。

这条焊缝之前已经被 ZPMC 的 MT 人员检验并接受。

Work By: <u>L. Liming</u>	Prepared by: <u>Zhangwei</u>	Reviewed by QCE: <u>Zhuo Shuangbao</u>
施工方: <u>2010.03.02</u>	准备: <u>2009.12.22</u>	质量工程师批准: <u>12.22</u>
<input type="checkbox"/> Drawing Error 图纸错误	<input type="checkbox"/> Material Defect 材料缺陷	<input type="checkbox"/> Fabrication Error 制作错误
<input type="checkbox"/> Other 其他原因		

Disposition:	<input type="checkbox"/> Use as is	<input type="checkbox"/> Repair	<input type="checkbox"/> Reject
处理措施:	回用	返修	拒收

Recommendation:

建议:

确认返修
Confirm and repair.

Prepared by: <u>L. Liming</u>	Approved by QCA: _____
准备: <u>2010.03.02</u>	质量经理批准

Reason for Nonconformance:

不符合原因:

线性缺陷在检测范围之外。
Linear defect was out of inspection area.

Prevention of Re-occurrence:

预防措施:

加大检测比例, 仔细检测
Enlarge inspection percentage and inspect carefully

Approved by/批准: L. Liming
2010 03 02

Technical Justification for Use-As-Is/Repair:

回用或返修的技术依据:

Attachment

附件

Non-attachment

无附件

Reviewed /批准: _____

Verification:

确认:

Acceptable

可接受

Unacceptable

不可接受

Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____

#R787-QCP-1300



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-17838R1 DATE日期 2010.02.07 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: DP138/DP275 6AW PLATE PANEL SPLICE		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. 28 ST , 2010
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
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	<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-345T2-X 18/22mm
WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	T-JOINT

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			
DP138-001-187	1R1			ACC.		100%MT
DP138-001-188	1R1			ACC.		100%MT
DP138-001-019	1R1			ACC.		100%MT
DP138-001-020	1R1			ACC.		100%MT
DP275A-066	1R1			ACC.		100%MT

AFTER B-CWR1065-1066

BLANK

EXAMINED BY 主操 Sun Gongchang <i>Sun Gongchang</i> 20/0.02.07 LEVEL-II SIGN 签名 / DATE日期	REVIEWED BY 审核 <i>Su Wei</i> 20/0.02.07 LEVEL-II SIGN / DATE日期
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	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-000569**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 29-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0472**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: 29-Oct-2009**Description of Non-Conformance:**

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance (QA) Inspector discovered two (2) Longitudinal Indications inside the cope hole of weld # DP275A-066. The 2 indications were measured at 15mm and 20mm in length.

This weld was previously tested and accepted by ZPMC QC MT.

Contractor's proposal to correct the problem:

Repair said indications and perform NDT required to verify weld quality.

Corrective action taken:

Contractor has submitted DNT documentation verifying weld is now 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**