

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-000215

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 08-Nov-2008

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

NCR #: ZPMC-0191

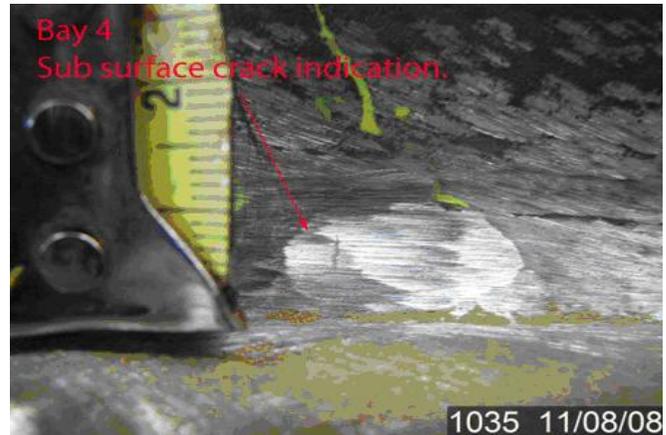
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006 L/R
Joint fit-up	Coating	Other	Component: Side Plate
Procedural	Procedural	Description: SP726A-001-030	

Reference Description: Crack indication overlooked on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly.

Description of Non-Conformance:

The Quality Assurance Inspector discovered a crack indication overlooked by Quality Control while performing magnetic particle verification on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly. The Quality Assurance Inspector informed American Bridge/Fluor Quality Assurance Inspector Hu Gui Hua about the crack indication overlooked by ZPMC Quality Control Inspectors. Mr. Hua agreed with the Quality Assurance Inspector and informed ZPMC Quality Control Inspector Gui Yang Wei about the overlooked crack indication. The Quality Assurance Inspector observed ZPMC personnel have removed 1mm of filler metal by grinding in an effort to confirm if the indication discovered by the Quality Assurance Inspector is a surface indication. The Quality Assurance Inspector observed ZPMC Quality Control personnel perform magnetic particle testing on the ground area, revealing the crack indication is a sub surface indication. Mr. Hua informed the Quality Assurance Inspector a critical weld repair will be issued prior to welding the repair.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

Special Provisions 8.3 Welding, General, "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."

AWSD1.5 2002 Section 6.26.2, "Welds that are subject to RT and MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any types of discontinuities described in 6.26.2.1..." 6.26.2.1, figure 6.8

Who discovered the problem: Quality Assurance Inspector Raymond Lara

Name of individual from Contractor notified: Hu Gui Hua

Time and method of notification: 10:25 am., verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 11/12/08

QC Inspector's Name: Gui Yang Wei

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

Inspected By:	Dautermann,Peter	SMR
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Reviewed By:	Dautermann,Peter	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 26-Nov-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000185

Subject: NCR No. ZPMC-0191

Reference Description: Crack indication overlooked on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly.

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:**

Remarks:

The Quality Assurance Inspector discovered a crack indication overlooked by Quality Control while performing magnetic particle verification on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly. The Quality Assurance Inspector informed American Bridge/Fluor Quality Assurance Inspector Hu Gui Hua about the crack indication overlooked by ZPMC Quality Control Inspectors. Mr. Hua agreed with the Quality Assurance Inspector and informed ZPMC Quality Control Inspector Gui Yang Wei about the overlooked crack indication. The Quality Assurance Inspector observed ZPMC personnel have removed 1mm of filler metal by grinding in an effort to confirm if the indication discovered by the Quality Assurance Inspector is a surface indication. The Quality Assurance Inspector observed ZPMC Quality Control personnel perform magnetic particle testing on the ground area, revealing the crack indication is a sub surface indication. Mr. Hua informed the Quality Assurance Inspector a critical weld repair will be issued prior to welding the repair.

Action Required and/or Action Taken:

Please propose a resolution for Quality Control Inspector overlooking crack indication. Critical weld repair for the sub surface indication has been submitted.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0191

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000185

Subject: NCR No. ZPMC-0191

Dated: 18-Dec-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000187 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will submit training documentation as objective evidence to close this NCR

ZPMC NDT department has been notified of the missed indication. ABF has requested an MT training session be conducted as a preventative action measure. ZPMC will submit training documentation as objective evidence to close this NCR

Submitted by:

Attachment(s): ABF-NPR-000187R00

Caltrans' comments:

Status: AAP

Date: 22-Dec-2008

The response is acceptable, but the Non-Conformance is not closed.

Please provide the above mentioned training documentation. Also, please provide documentation of the weld repairs that were performed and that the repairs were acceptable.

The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0191 at that time.

Submitted by: Wright, Doug

Date: 23-Dec-2008

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000185

Subject: NCR No. ZPMC-0191

Dated: 07-Jan-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000187 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC requests closure of this NCR based on attached documentation.

Please see attached documents.

Submitted by:

Attachment(s): ABF-NPR-000187R01; docs to close NCR ZPMC-0191

Caltrans' comments:

Status: CLO

Date: 12-Jan-2009

The proposed resolution is acceptable. An internal NCR was written, and the MT technicians received additional training. Also, the welds in question have been accepted by VT and MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0191 is closed.

Submitted by: Wright, Doug

Date: 12-Jan-2009

Attachment(s):



TRANSMITTAL LETTER

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 12/31/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: CALTRANS NCR FOR CLOSURE

SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.B-328 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER
NCR-210(ZPMC-0187)/NCR-216(ZPMC-0192)/NCR-215(ZPMC-0191)
- (3) COPY OF THE MT TRAINING DOCUMENTATION
- (4) COPY OF THE ACCEPTABLE VT AND MT INSPECTION REPORTS
- (5) ZPMC INTERNAL NCR

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:



 PLAN HOLDER

31-DEC-2008

 DATE

ABFJV

 COMPANY

 PHONE NO.

PLAN NUMBER: N/A
 #R787-QCP-102



No. B-328

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-12-30

REGARDING: NCR-000210/216/215(ZPMC-0187/192/191)

With this letter of response, ZPMC requests closure for Caltrans NCR-000210/216/215(ZPMC-0187/192/191). We have trained our NDT operator with the dry magnetic particles. And provided the meeting content and sign list for objective evidence.

And our NDT QC had re-inspected the location which overlooked in the first time. Actually it's our mistake without enough carefully. But we have performed the repair and completed with the MT, therefore attached the visual and MT report to support that the weld quality had reached the requirement of the standard.

So ZPMC considers NCR-000210/216/215(ZPMC-0187/192/191) can be closed, and provide the attached documents to these weld crack repair.

Please check the attached documentation for acceptance and close the NCR-000210/216/215(ZPMC-0187/192/191).

ATTACHMENT:

NCR-000210/216/215(ZPMC-0187/192/191)

The MT training documentation

The acceptable VT and MT inspection reports

ZPMC internal NCR

2008.12.30

Craig Kuyper for
Steve Dawson
FQA Manager
2008-12-31



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
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NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 26-Nov-2008

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Dave Williams Consultant
Subject: NCR No. ZPMC-0191

Job Name: SAS Superstructure
Document No: 05.03.06-000185

Reference Description: Crack indication overlooked on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly.

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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:

Remarks:

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Action Required and/or Action Taken:

Please propose a resolution for Quality Control Inspector overlooking crack indication. Critical weld repair for the sub surface indication has been submitted.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0191

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom

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, PRC

Report No: NCR-000215

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 08-Nov-2008

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

NCR #: ZPMC-0191

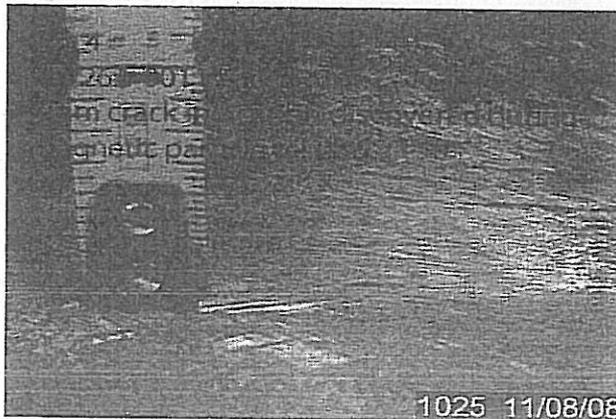
Type of problem:

Welding **Concrete** **Other**
Welding **Curing** **Procedural** **Bridge No:** 34-0006 L/R
Joint fit-up **Coating** **Other** **Component:** Side Plate
Procedural **Procedural** **Description:** SP726A-001-030

Reference Description: Crack indication overlooked on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly.

Description of Non-Conformance:

The Quality Assurance Inspector discovered a crack indication overlooked by Quality Control while performing magnetic particle verification on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly. The Quality Assurance Inspector informed American Bridge/Fluor Quality Assurance Inspector Hu Gui Hua about the crack indication overlooked by ZPMC Quality Control Inspectors. Mr. Hua agreed with the Quality Assurance Inspector and informed ZPMC Quality Control Inspector Gui Yang Wei about the overlooked crack indication. The Quality Assurance Inspector observed ZPMC personnel have removed 1mm of filler metal by grinding in an effort to confirm if the indication discovered by the Quality Assurance Inspector is a surface indication. The Quality Assurance Inspector observed ZPMC Quality Control personnel perform magnetic particle testing on the ground area, revealing the crack indication is a sub surface indication. Mr. Hua informed the Quality Assurance Inspector a critical weld repair will be issued prior to welding the repair.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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Special Provisions 8.3 Welding, General, "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 ensure that materials and workmanship conform to the requirements of the contract documents."

AWSD1.5 2002 Section 6.26.2, "Welds that are subject to RT and MT in addition to visual inspection shall have no cracks and shall be unacceptable if the RT or MT shows any types of discontinuities described in 6.26.2.1..." 6.26.2.1, figure 6.8

Who discovered the problem: Quality Assurance Inspector Raymond Lara

Name of individual from Contractor notified: Hu Gui Hua

Time and method of notification: 10:25 am., verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 11/12/08

QC Inspector's Name: Gui Yang Wei

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

Inspected By: Dautermann,Peter

SMR

Reviewed By: Dautermann,Peter

SMR

B-VT 10426



Visual Weld Inspection Report
焊缝目视检查报告

Caltrans Contract No.
加州合同编号

04-0120F4
San Francisco Oakland Bay Bridge
美国海湾大桥

Project No.: 项目编号

ZP06-787

Weld No.
焊缝编号

Welder I.D.#
焊工识别号

Location
位置

Welding consumables
焊接材料

Undercut
咬边

Porosity
气孔

Over lap
焊瘤

Arc strike
电弧擦伤

Spatters
飞溅

Crack
裂纹

Accept or Reject after repair
返修后接受或拒收

周数

53#

日期

2008.11.12

Girder/梁:

OBG SIDE PLATE

Tower/塔:

NA

Quality Control Representative:
质检代表:

Chen Chik Chan
02110701

CWI:
检验员:

Quality Assurance Manager ~Approval
质量控制经理:

Hu Gary

After root weld

After cover pass

After CWR or WRR No.:

After HSR No.:

Others:

#R787-QCP-603

"√" is no defects. "X" is defects. "NA" is not applicable.



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-4752R1 DATE日期 2008.11.28 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: SP726A CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4
 OBG WEST BOX SIDE PLATE 8C-E7

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, 2008

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: WELDING 焊接件 Material & thickness 母材,厚度: A709M-345F2-X 16/9mm
 CASTING 铸件
 FORGING 锻造

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			
SP726-001-030	1R1			ACC.		100%MT

AFTER B-CWR227

BLANK

EXAMINED BY 主探: Cai Xinlin REVIEWED BY 审核: Wang Wei

LEVEL-II SIGN 签名 / DATE日期: 08.11.28 LEVEL-II SIGN 签名 / DATE日期: 08.11.28

质量经理 / QCM: [Signature] 用户CUSTOMER: _____
 签字 SIGN / 日期 DATE: [Signature] 签字 SIGN / 日期 DATE: _____

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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, PRC**Report No:** NCS-000185**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Feb-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0191**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006 L/R
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Description:	

Date the Non-Conformance Report was written: 08-Nov-2008**Description of Non-Conformance:**

The Quality Assurance Inspector discovered a crack indication overlooked by Quality Control while performing magnetic particle verification on weld # SP726A-001-030 located on the SP726A-001 side plate sub assembly. The Quality Assurance Inspector informed American Bridge/Fluor Quality Assurance Inspector Hu Gui Hua about the crack indication overlooked by ZPMC Quality Control Inspectors. Mr. Hua agreed with the Quality Assurance Inspector and informed ZPMC Quality Control Inspector Gui Yang Wei about the overlooked crack indication. The Quality Assurance Inspector observed ZPMC personnel have removed 1mm of filler metal by grinding in an effort to confirm if the indication discovered by the Quality Assurance Inspector is a surface indication. The Quality Assurance Inspector observed ZPMC Quality Control personnel perform magnetic particle testing on the ground area, revealing the crack indication is a sub surface indication. Mr. Hua informed the Quality Assurance Inspector a critical weld repair will be issued prior to welding the repair.

Contractor's proposal to correct the problem:

ZPMC NDT technician re-inspected the location and found the indications. ZPMC welders performed weld repairs. ZPMC NDT technician performed MT and VT inspection and found the welds acceptable. The MT technicians who failed to detect the indications also received additional training.

Corrective action taken:

ZPMC welders performed weld repairs. The MT and VT result shows that the weld is acceptable. The MT technicians who failed to detect the indications also received additional training.

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 Eric Tsang, +(86) 150.0042.2372, who represents the

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Office of Structural Materials for your project.

Inspected By: Tsang, Eric

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer
