

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-000694**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0661**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 9AE Side Panel
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: Missed UT indication by QC on Segment 9AE Side Panel**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Segment 9AE, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Class "A" indication measuring approximately 25mm in length.
- The weld is a Complete Joint Penetration (CJP) butt weld joining Side plate SP622 to side plate SP582.
- The db rating is +8.
- The Thickness of the Side plate is 16mm.
- The "Y" location is approximately 2650mm from the west termination of the weld.
- The weld is identified as SEG050A-003.
- The indication is clearly marked near the weld.
- Segment 9AE is located in the segment repair yard north of the blast shop.

The Notice of Witness Inspection Number (NWIT) is 005297. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3. specifies a class A indication as having a dbs rating of +10 and lower for weld thicknesses 8mm through 20mm.

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."

Who discovered the problem: Chandra Sudalaimuthu**Name of individual from Contractor notified:** Man Kit Li**Time and method of notification:** 1830 hours_03/10/10_Verbal**Name of Caltrans Engineer notified:** Bill Howe

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 1100 hours_03/11/10_Verbal

QC Inspector's Name: Zhong Wei

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:	Tsang, Eric	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: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	Date:	14-Mar-2010
Dear:	Mr. Charles Kanapicki	Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Job Name:	SAS Superstructure
Subject:	NCR No. ZPMC-0661	Document No:	05.03.06-000651

Reference Description: Missed UT indication by QC on Segment 9AE Side Panel

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:** 09

Remarks:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Segment 9AE, this Quality Assurance Inspector (QA) discovered the following issue:

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Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Provide training or equipment as required to the ZPMC technician so that these indications are detected. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0661

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

NCT

(*Continued Page 2 of 2*)

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000651

Subject: NCR No. ZPMC-0661

Dated: 30-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000640 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the indication and is providing the NDT documentation to show that the weld is acceptable. ZPMC has repaired the indication and is providing the NDT documentation to show that the weld is acceptable. ZPMC QA has written an internal NCR to make the QC inspectors aware of the non conformance and prevent future occurrences. Based on this ZPMC request this NCR be closed.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000640R00;

Caltrans' comments:

Status: CLO

Date: 05-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0661 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 05-Apr-2010



No. B-714

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-29

REGARDING: NCR-000694 (ZPMC-0661)

Attached documentations show this indication has been removed, fixed and now is acceptable. ZPMC internal NCR was issued reflecting to this missed indication. Based on this, ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000694 (ZPMC-0661)

NCR-B-459(ZPMC-0661)

B-WR11115

B787-UT-11557R1

A handwritten signature in black ink, appearing to be "J. W.", is written in the lower-left quadrant of the page.

3/20/10

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection



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Vallejo, CA 94592-1133
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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-000694

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 10-Mar-2010

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

NCR #: ZPMC-0661

Type of problem:

Welding Concrete Other
Welding Curing Procedural Bridge No: 34-0006
Joint fit-up Coating Other Component: Segment 9AE Side Panel
Procedural Procedural Description: Missed UT Indication by QC

Reference Description: Missed UT indication by QC on Segment 9AE Side Panel

Description of Non-Conformance:

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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."

Who discovered the problem: Chandra Sudalaimuthu

Name of individual from Contractor notified: Man Kit Li

Time and method of notification: 1830 hours_03/10/10_Verbal

Name of Caltrans Engineer notified: Bill Howe

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 1100 hours_03/11/10_Verbal

QC Inspector's Name: Zhong Wei

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:	Tsang, Eric	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: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 14-Mar-2010

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager
 Subject: NCR No. ZPMC-0661

Job Name: SAS Superstructure
 Document No: 05.03.06-000651

Reference Description: Missed UT indication by QC on Segment 9AE Side Panel

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: 09

Remarks:

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Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Provide training or equipment as required to the ZPMC technician so that these indications are detected. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0661

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao

02.02.15.04
 NCT 05.03.06-000651.NCT

Received
 NCT-000651 15 Mar 10 Page 1 of 2

NCT

(Continued Page 2 of 2)

File: 05.03.06



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-459(ZPMC-0661)

Item: Miss UT indication
 名称描述: UT 漏检
 Item Number:
 件号:
 Drawing:
 图号: 9AE

Location: Outside Yard
 位置: 外场
 Date:
 日期: 2010-03-24

Description of Nonconformance:
 During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Segment 9AE, this Quality Assurance Inspector (QA) discovered the following issue: One (1) Class "A" indication measuring approximately 25mm in length. The weld is a CJP butt weld joining Side plate SP622 to side plate SP582. The db rating is +8. The thickness of the side plate is 16mm. The Y location is approximately 2650mm from the west termination of the weld. The weld is identified as SEG050A-003. The indication is clearly marked near the weld. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

在对 9AE 进行 UT 检测的过程中, 加州检验员发现以下问题:
 一条 A 级缺陷长度将近 25mm。焊缝是一条 CJP 焊缝连接 SP622 至 SP582。DB 值是+8。斜底板厚度是 16mm。Y 至从西线焊缝端头开始将近 2650mm 位置。焊缝编号是 SEG050A-003。该缺陷被清楚标记在焊缝附近。之前该区域已经被 ZPMC UT 人员所检测并接受。按照合同要求, 该位置需要进行 100% UT 检测。

Work By: W. L. Wong Prepared by: Zhangwei Reviewed by QCE: Luy Zou
 施工方: 2010.03.26 准备: 2010.03.24 质量工程师批准: 3/24/10
 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: Repair.

Prepared by: W. L. Wong Approved by QCA: _____
 准备: 2010.03.26 质量经理批准

Reason for Nonconformance:
 不符合原因: db 值误差 DB error.

Prevention of Re-occurrence:
 预防措施: 控制仪器精度在标准范围内.
 Control equipment accuracy in standard area.

Approved by/批准: WZ Wang
2010.03.26

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



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	SEG050A	报告编号 Report No.	B-WR11115
合同号 Contract No.	04-0120F4	部件名称 Items Name	9AE BOTTOM PLATE SPLICE	NDT报告编号 Report No. of NDT	B787-UT-11557 1
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

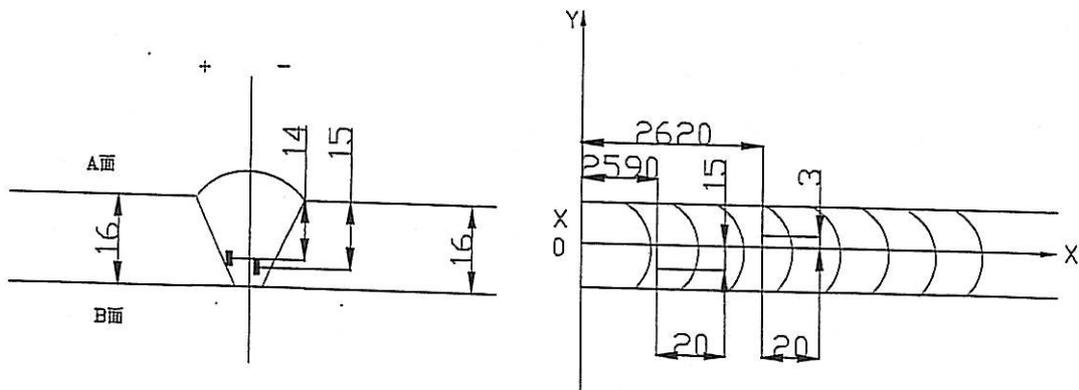
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG050A-003

检验员 (Inspector) *Sun Yin* 日期(Date): *1003.15* 2010.03.15

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG050A-003

产生原因:

Caused:

1、焊道未及时处理干净。

1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Li Zhigang* 日期(Date): 3.1.8

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D 为缺陷深度, T 为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;

2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;

3. 焊前对修补区域进行VT检测保证缺陷完全被清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 根据批准的车间图纸检查焊缝.

1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, "D" is depth of defects, "T" is thickness of metal) to remove all defects;

2. Follow repair WPS for joint preparation, preheat, and weld deposit;

3. Verify with VT no defects remain in the weld joint prior to welding;

4. Grind the repaired area flush with base metal or the adjacent weld;

5. Check the welds according to the working drawings.

工艺: *hexiaolin*
Technical engineer

审核:
Approved by

日期 10-3-18
Date



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG050A	报告编号 Report No.	B-WR11115
合同号 Contract No.:	04-0120F4	部件名称 Items Name	9AE BOTTOM PLATE SPLICE	NDT报告编号 Report No. of NDT	B787-UT-11557R 1
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。
1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): *Li Zhigang* 日期(Date): 3.18

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1 WPS-345-SMAW-4 G(4F)-Repair	工艺员 technologist	<i>Hexiaslin</i> 4.18
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>96°</i>	返修的缺陷 Description of discontinuity	<i>IF</i>
焊前处理检查 Inspection before welding	<i>ACC</i>	焊前预热温度 Preheat temperature before welding	<i>100°</i>
最大碳刨深度 Max. depth of gouging	<i>7</i>	碳刨总长 Total length of gouging	<i>260</i>
焊工 welder <i>054013</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position	<i>2G</i>
焊接电流 Current <i>152</i>	焊接电压 Voltage <i>24.6</i>	焊接速度 Speed	<i>102</i>

返修后检查
Inspection After repairing:

外观检查 VT result <i>ACC</i>	检验员 Inspector <i>Li Panhua</i>	日期 Date <i>2010.3.20</i>
NDT复检 NDT result <i>ACC</i>	探伤员 NDT person <i>Sun Yip</i>	日期 Date <i>2010.3.25</i>

见证:
Witness/Review:备注:
Remark:

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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, P.R. China**Report No:** NCS-000583**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0661**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: 10-Mar-2010**Description of Non-Conformance:**

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Contractor's proposal to correct the problem:

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

Corrective action taken:

Contractor supplied post repair NDT documentation verifying weld now conforms with Contract specifications.

An internal NCR was also issued by the Contractor in regards to this issue.

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:**

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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Structural Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer
