

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, China**Report No:** NCR-000779**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0741**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: 21TR4-003
Procedural	Procedural	Description:	

Reference Description: UT Missed indication by QA**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Traveler Rail (TR)-21TR4-003, this QA Inspector discovered the following issue:

- One Class "A" rejectable indication measuring approximately 15 mm in length.
- The Indication rating is +7dB.
- The depth of the indication is 18 mm
- The weld joint is identified as 21TR4-003-005.
- The weld is a Complete Joint Penetration (CJP) with reinforcement fillet weld T joint joining TR flange to web.
- The thickness of the TR web is 20 mm.
- The "Y" location is 5mm from the nearest end of the weld.
- The indication is clearly marked on or near the weld.
- This TR is located in Bay 1.

The Notice of Witness Inspection Number (NWIT) is 06076. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 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 db 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."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Surendra Prabhu

Name of individual from Contractor notified: Mr. Wang Wen Bin

Time and method of notification: 1700 hours, 06/28/10, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 8:30, 6/29/10, Email

QC Inspector's Name: Mr. Ai 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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Devey,Jim	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: 02-Jul-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-0741

Job Name: SAS Superstructure
Document No: 05.03.06-000737

Reference Description: UT Missed indication by QA

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:** N/A

Remarks:

- During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Traveler Rail (TR)- 21TR4-003, this QA Inspector 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. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Laraine Woo Transportation Engineer
Attachments: ZPMC-0741

cc:

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: 05.03.06-000737

Subject: NCR No. ZPMC-0741

Dated: 30-Aug-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000755 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is submitting the repair report and the NDT after to show that it is acceptable.

ZPMC has issued an internal NCR and discussed this issue with the NDT Department head to reduce future occurrences. The indication have been tested, repaired and found to be acceptable. ZPMC is submitting the repair report and the NDT after to show that it is acceptable. Based on this ZPCM requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000755R00;

Caltrans' comments:

Status: CLO

Date: 08-Sep-2010

The proposed resolution is acceptable. This NCR is considered closed.

Submitted by: Woo, Laraine

Attachment(s):

Date: 08-Sep-2010



No. B-859

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-8-28

REGARDING: NCR-000779(ZPMC-0741)

For this case, ZPMC has issue an internal NCR to address this issue and ZPMC QA personnel have talked with the head of the NDT department. The missed indications have been repaired and were tested to be acceptable. ZPMC is providing the WRR and NDT record for review. Based on this, please consider closure of this NCR.

ATTACHMENT:

NCR-000779(ZPMC-0741)

B-WR14481

B787-UT-14366

B787-UT-14366R1

Zhao Jia neng
2010/8/28

WR/NDT



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: 02-Jul-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: 05.03.06-000737

Subject: NCR No. ZPMC-0741

Reference Description: UT Missed indication by QA

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- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
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Material Location: OBG **Lift:** N/A

Remarks:

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WR/NDT

Transmitted by: Laraine Woo Transportation Engineer
Attachments: ZPMC-0741

cc:

NCT

(Continued Page 2 of 2)

File: 05.03.06

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, China**Report No:** NCR-000779**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0741**Type of problem:**Welding Concrete Other Welding Curing Procedural **Bridge No:** 34-0006Joint fit-up Coating Other **Component:** 21TR4-003Procedural Procedural **Description:****Reference Description:** UT Missed indication by QA**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Traveler Rail (TR)-21TR4-003, this QA Inspector discovered the following issue:

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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."



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	21TR4	报告编号 Report No.	B-WR14481
合同号 Contract No.	04-0120F4	部件名称 Items Name	TRAVELER RAIL	NDT报告编号 Report No. of NDT	B787-UT-14366
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

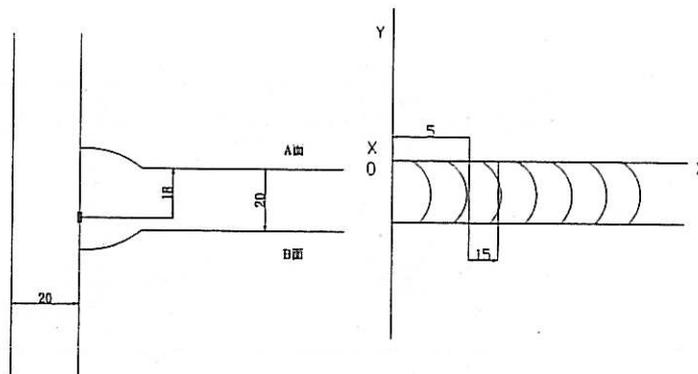
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) 21TR4-003-005

检验员 (Inspector) Jiang Yong 日期(Date) : 2010.08.08

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: 21TR4-003-005

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): *Hu Ku Zhang*

日期(Date): *8.9.*

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: *He Xiaolin*
Technical engineer

审核:
Approved by

日期 *10.8.9.*
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	21TR4	报告编号 Report No.	B-WR14481
合同号 Contract No.:	04-0120F4	部件名称 Items Name	TRAVELER RAIL	NDT报告编号 Report No.of NDT	B787-UT-14366
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): *Hu Yu Zhang* 日期(Date): *8.9*

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-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1 WPS-345-SMAW-3 G(3F)-Repair WPS-345-SMAW-4 G(4F)-Repair WPS-345-SMAW-1 G(1F)-FCM-Repair WPS-345-SMAW-2 G(2F)-FCM-Repair WPS-345-SMAW-3 G(3F)-FCM-Repair WPS-345-SMAW-4 G(4F)-FCM-Repair	工艺员 technologist	<i>hexiaohu</i> <i>8.9</i>
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返修(碳刨)前预热温度 Preheat temperature before gouging	<i>73°C</i>	返修的缺陷 Description of discontinuity	<i>slag</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>127°C</i>
最大碳刨深度 Max. depth of gouging	<i>4mm</i>	碳刨总长 Total length of gouging	<i>130mm</i>

焊工 welder	<i>216575</i>	焊接类型 welding type	<i>FCAW</i>	焊接位置 position	<i>1G</i>
焊接电流 Current	<i>292</i>	焊接电压 Voltage	<i>30.3</i>	焊接速度 Speed	<i>521</i>

返修后检查 Inspection After repairing:					
外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>Lishijiang</i>	日期 Date	<i>2010-8-9</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Jiang Yany</i>	日期 Date	<i>2010.08.27</i>

见证:
Witness/Review:备注:
Remark:

DEPARTMENT OF TRANSPORTATION

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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, China**Report No:** NCS-000754**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0741**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: 28-Jun-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 is in conformance with Contract weld quality requirements. Contractor has also taken action directly with NDT Technicians to avoid similar issues in the future.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

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

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer