

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-001001**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Apr-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0959**Type of problem:**

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

Reference Description: Missed UT Indication Discovered by QA on an Channel Splice Plate that is not able to be identified

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on X3305K-002-002 weld, this Quality Assurance Inspector (QA) discovered the following issues:

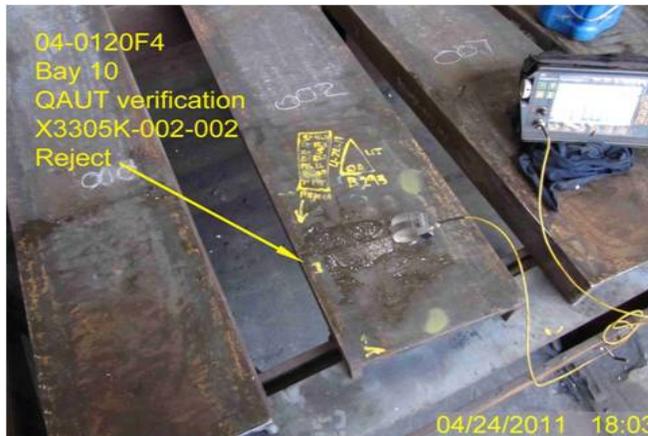
- One (1) Class "A" indication measuring approximately 10mm in length.
- The Indication rating is +9dB.
- Piece Mark "X3305K" was not able to identified per the latest shop drawing.
- The thickness of the plate is 18mm and depth of the indication approximately 15.8mm.
- The "Y" location is approximately 195mm from weld termination.
- The weld is a Complete Joint Penetration (CJP) Corner-Joint joining flange to the web.
- The indication is clearly marked by CT QA on/near the weld.
- Fabricated channel assembly is located inside Bay 10.

The Notice of Witness Inspection Number (NWIT) is 08919, Item 3. The indication is located within 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.

For further information, please see the attached pictures.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication in this category shall be rejected (regardless of length).

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: Mike Hasler

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 15:30_4/25/11_Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 09:00_4/26/11_Email

QC Inspector's Name: Wang Lu (Testino)

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

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

Reviewed By: Wahbeh,Mazen SMR



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-Apr-2011
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-0959	Document No:	05.03.06-000958

Reference Description: Missed UT Indication Discovered by QA on an Channel Splice Plate that is not able to be identified

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:

During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on X3305K-002-002 weld, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) Class “A” indication measuring approximately 10mm in length.
- The Indication rating is +9dB.
- Piece Mark “X3305K” was not able to identified per the latest shop drawing.
- The thickness of the plate is 18mm and depth of the indication approximately 15.8mm.
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Action Required and/or Action Taken:

Propose a resolution for this non-conformance and provide documentation that the deficiency has been brought into compliance with the contract requirements. Propose a resolution that addresses the apparent failure of Quality Control to identify the indication. Additionally, provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

The response for the resolution of this issue is requested within 7 days.

NCT

(Continued Page 2 of 2)

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0959

cc: Rick Morrow, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

To: CALTRANS - SAS Superstructure
333 Burma Road
Oakland CA 94607
Attention: Siegenthaler, Peter
Resident Engineer
Ref: 05.03.06-000958
Subject: NCR No. ZPMC-0959

Dated: 04-May-2011
Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No.: ABF-NPR-000949 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution:

Please see ZPMC response comments for NCR closure and provide the subject attached documents documenting objective evidence for NCR closure.

Submitted by: Lawton, Steve
Attachment(s): ABF-NPR-000949R00;

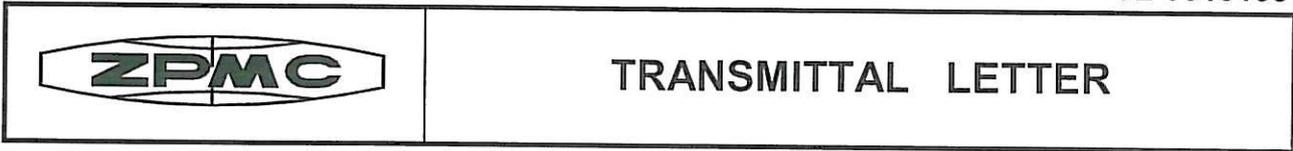
Caltrans' comments:

Status: CLO
Date: 04-May-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0959 is closed.

Submitted by: Eagen, Sean
Attachment(s):

Date: 04-May-2011



PROJECT: S.F.O.B.B.

DATE:2011-05-02

TO: ROSEMARY/ABF JV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: OBG NCR

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

(01) LR: No. B-990

(02) NCR-001001(ZPMC-0959)

B-WR20827 R0

B787-UT-20533 R2

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:

Law

DATE: RECEIVED 02 MAY 2011

16:38

COMPANY:



PHONE NO.

PLAN NUMBER:N/A

#R787-QCP-102



No. B-990

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2011-05-02

REGARDING: NCR-001001(ZPMC-0959)

ZPMC acknowledged this problem and has issued an internal NCR. ZPMC has repaired the indications noted in the NCR and is providing WR & NDT documentation after the repair to show the indication has been removed. Based on these actions, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-001001(ZPMC-0959)

B-WR20827 R0

B787-UT-20533 R2

zhongwei
5/2/11



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 Date: 26-Apr-2011
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: 05.03.06-000958
Subject: NCR No. ZPMC-0959

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(Continued Page 2 of 2)

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0959

cc: Rick Morrow, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

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, China

Report No: NCR-001001

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 24-Apr-2011

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

NCR #: ZPMC-0959

Type of problem:

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

Reference Description: Missed UT Indication Discovered by QA on an Channel Splice Plate that is not able to be identified

Description of Non-Conformance:

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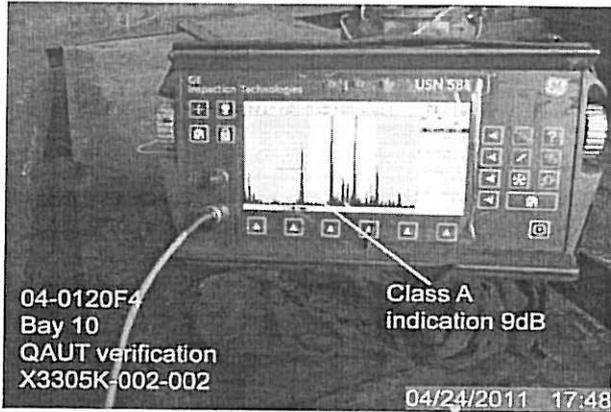
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For further information, please see the attached pictures.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication in this category shall be rejected (regardless of length).

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: Mike Hasler

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 15:30_4/25/11_Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 09:00_4/26/11_Email

QC Inspector's Name: Wang Lu (Testino)

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

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
Reviewed By: Wahbeh,Mazen	SMR



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	X3305K-002	报告编号 Report No.	B-WR20827
合同号 Contract No.	04-0120F4	部件名称 Items Name	CONNECTION PLATE	NDT报告编号 Report No. of NDT	B787-UT-20533R
项目编号 Project No.:	ZP06-787		OUTSIDE		

焊缝缺陷描述：(普通UT探伤发现的缺陷长度小于最大允许长度)

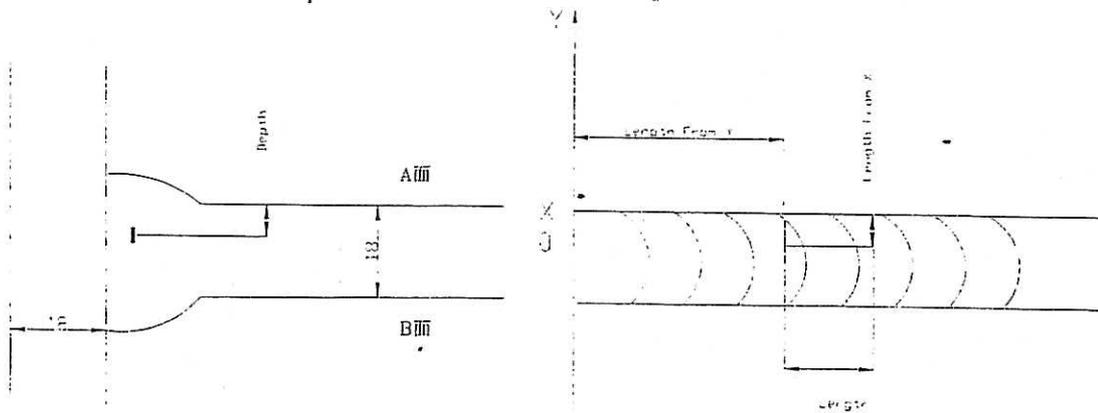
(Description of welding discontinuity): Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

焊缝编号为 x3305k-002-002

检验员 (Inspector) : Xu Rongqiang (Date) : 2011.04.25

焊缝返修位置示意图：

Draft of welding discontinuity:



Please see the detail data from UT report!

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): *Zhang* 日期(Date): 2011.04.25

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. 将修补区域打磨到与母材或邻近焊缝平齐;
 4. 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. Grind the repaired area flush with base metal or the adjacent weld;
 4. Check the welds according to the working drawings.

工艺: *Niu Tiefeng*
Technical engineer

审核: *Lu Jianhua* 日期: 2011.04.25
Approved by Date



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	X3305K-002	报告编号 Report No.	B-WR20827
合同号 Contract No.:	04-0120F4	部件名称 Items Name	CONNECTION PLATE OUTSIDE	NDT报告编号 Report No. of NDT	B787-UT-20533R 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 Hui gang* 日期(Date): 2011.09.25

参照的WPS编号 Repair WPS No.	<input type="checkbox"/> WPS-345-SMAW-1G(1F)- Repair <input type="checkbox"/> WPS-345-FCAW-1G(1F)- Repair-1 <input type="checkbox"/> WPS-345-SMAW-2G(2F)-Repair <input type="checkbox"/> WPS-345-FCAW-2G(2F)-Repair-1 <input checked="" type="checkbox"/> WPS-345-SMAW-3G(3F)- Repair <input type="checkbox"/> WPS-345-SMAW-4G(4F)- Repair <input type="checkbox"/> WPS-345-SMAW-1G(1F)-FCM-Repair <input type="checkbox"/> WPS-345-SMAW-2G(2F)-FCM-Repair <input type="checkbox"/> WPS-345-SMAW-3G(3F)-FCM-Repair <input type="checkbox"/> WPS-345-SMAW-4G(4F)-FCM-Repair <input type="checkbox"/> WPS-345-FCAW-3G(3F)-Repair	工艺员 technologist	<i>Niu Tiefeng</i>
----------------------------	--	---------------------	--------------------

返修(碳刨)前预热温度 Preheat temperature before gouging	65	返修的缺陷 Description of discontinuity	气孔
焊前处理检查 Inspection before welding	打磨光滑	焊前预热温度 Preheat temperature before welding	110
最大碳刨深度 Max. depth of gouging	2	碳刨总长 Total length of gouging	40

焊工 welder <i>05720</i>	焊接类型 welding-type <i>SMAW</i>	焊接位置 position <i>3G</i>
焊接电流 Current <i>157</i>	焊接电压 Voltage <i>25</i>	焊接速度 Speed <i>110</i>

返修后检查 Inspection After repairing:		
外观检查 VT result <i>V/A</i>	检验员 Inspector <i>Xu Lei Feng</i> <i>07031411</i>	日期 Date <i>11/4/26</i>
NDT复检 NDT result <i>w/A</i>	探伤员 NDT person <i>Xu Hongyan</i>	日期 Date <i>2011.09.30</i>

见证:
Witness/Review:

备注:
Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-20533R2 DATE 2011.04.30 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: CONNECTION PLATE OUTSIDE DRAWING NO.: X3305K-001 CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SMAW T-JOINT Dec. 28ST, 2011

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE AMERICA EPOCH 4B 071565311

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T2-X 18mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
AMERICA	70°	2.25MHz	0.75×0.625 in				
Reference Level 参考灵敏度						20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
X3305K-002-002	1R2	69				41									ACC.	100%

AFTER B-WR20827

BLANK

EXAMINED BY 主探 <i>Xu Rongyan</i> LEVEL - II SIGN ✓ DATE 2011.04.30	REVIEWED BY 审核 <i>Dai Yemsheng</i> LEVEL - II SIGN 1 DATE 2011.04.30
质量经理 / QCM <i>[Signature]</i>	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

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-000965**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 05-May-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0959**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: 24-Apr-2011**Description of Non-Conformance:**

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For further information, please see the attached pictures.

Contractor's proposal to correct the problem:

Contractor will repair the weld indication. Contractor will provide the NDT report to prove the weld is acceptable after repair.

Corrective action taken:

Contractor repaired the weld and submitted the NDT report showing the weld is sound. ZPMC issued an internal NCR to the personnel concerned.

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:

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Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer