

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-000992**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0950**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: SEGMENT 13CE, SEG3011L-219, RS3187M
Procedural	Procedural	Description:	

Reference Description: Missed UT Indication Discovered by QA on Segment 13CE RS Stiffener Weld at SP3075A

Description of Non-Conformance:

During Quality Assurance (QA) Ultrasonic Testing of OBG Segment 13CE, This Quality Assurance inspector discovered the following issue.

- A total of one (1) Class 'A' longitudinal indication measuring approximately 10 mm in length in the side panel rib stiffener (RS3187M) attachment to the floor beam web, east of panel point 122.5.
- The indication dB rating is -1db.
- Material thickness is 22 mm and depth of the indication is approximately 16.74 mm.
- The 'Y' location of the indication is 40 mm.
- The weld is identified as SEG3011L-219.
- The indication is clearly marked near the weld.
- Segment 13CE is located in Bay 14.

The notice of witness inspection (NWIT) no. is 08574. The indication is located within the area which was previously tested and accepted by ZPMC Quality Control (QC) personnel. As per contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6; Table 6.3 specifies a class “A” indication as having a rating of 8dbs and under for material thicknesses 20mm through 38mm.

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: Ramesh Gade

Name of individual from Contractor notified: Mr. Liang Biao

Time and method of notification: Verbal on 19 March 2011, 0030 hrs

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: Email on 21 March 2011, 0900 hrs

QC Inspector's Name: Zhong Yong Gang

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: 21-Mar-2011

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: 05.03.06-000949

Subject: NCR No. ZPMC-0950

Reference Description: Missed UT Indication Discovered by QA on Segment 13CE RS Stiffener Weld at SP3075A

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:** 13

Remarks:

During Quality Assurance (QA) Ultrasonic Testing of OBG Segment 13CE, This Quality Assurance inspector discovered the following issue.

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- The 'Y' location of the indication is 40 mm.

See attached NCR No. ZPMC-0950 for details.

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- Segment 13CE is located in Bay 14.

The notice of witness inspection (NWIT) no. is 08574. The indication is located within the area which was previously tested and accepted by ZPMC Quality Control (QC) personnel. As per contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

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: Ching Chao

NCT

(Continued Page 2 of 2)

Attachments: ZPMC-0950

cc: Peter Siegenthaler, Stanley Ku, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000949

Subject: NCR No. ZPMC-0950

Dated: 18-May-2011

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000954 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: 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.

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.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000954R00;

Caltrans' comments:

Status: CLO

Date: 19-May-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0950 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 19-May-2011



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

DATE:2011-05-18

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-995

(02) NCR-000992(ZPMC-0950)

B-WR20470 R0

B787-UT-19859 R1

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

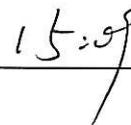
ACKNOWLEDGEMENT

PLAN HOLDER:



RECEIVED 18 MAY 2011

DATE:



COMPANY:



PHONE NO.

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



No. B-995

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2011-05-18

REGARDING: NCR-000992(ZPMC-0950)

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-000992(ZPMC-0950)

B-WR20470 R0

B787-LT-19859 R1

A handwritten signature in black ink, appearing to read 'zhongwei', is located below the attachment list. The signature is written in a cursive, somewhat stylized script.

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: 21-Mar-2011

Contract No: 04-012014
04-SF-80-13.2 + 13.9

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project Fabrication Manager
Subject: NCR No. ZPMC-0950

Job Name: SAS Superstructure
Document No: 05.03.06-000949

Reference Description: Missed UT Indication Discovered by QA on Segment 13CE RS Stiffener Weld at SP3075A

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Action Required and/or Action Taken:

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Transmitted by: Ching Chao

05.03.06-000949_NCT

NCT

(Continued Page 2 of 2)

Attachments: ZPMC-0950

cc: Peter Siegenthaler, Stanley Ku, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

DEPARTMENT OF TRANSPORTATION
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Contract #: 04-0120F4
City: 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-000992

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Mar-2011

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

NCR #: ZPMC-0950

Type of problem:

Welding Concrete Other

Welding Curing Procedural Bridge No: 34-0006

Joint fit-up Coating Other Component: SEGMENT 13CE, SEG3011L-219, RS3187M

Procedural Procedural Description:

Reference Description: Missed UT Indication Discovered by QA on Segment 13CE RS Stiffener Weld at SP3075A

Description of Non-Conformance:

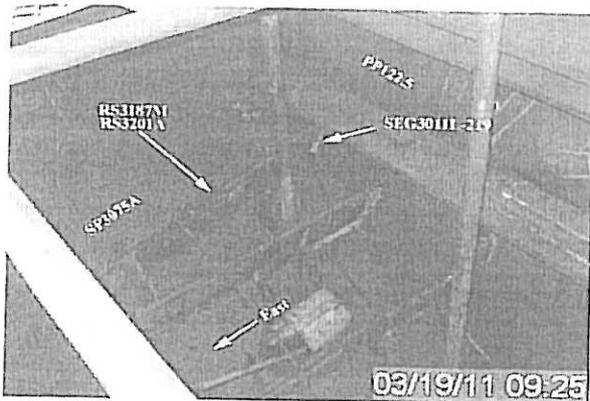
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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AWS D1.5-02 Section 6; Table 6.3 specifies a class "A" indication as having a rating of 8dbs and under for material thicknesses 20mm through 38mm.

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: Ramesh Gade

Name of individual from Contractor notified: Mr. Liang Biao

Time and method of notification: Verbal on 19 March 2011, 0030 hrs

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: Email on 21 March 2011, 0900 hrs

QC Inspector's Name: Zhong Yong Gang

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

Welding Repair Report

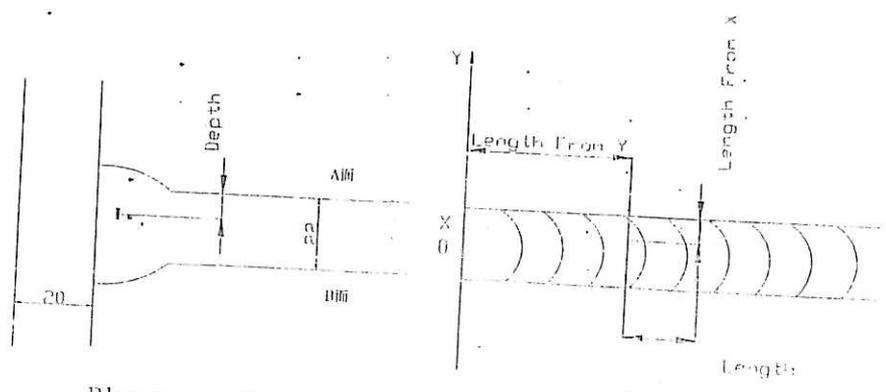
版本 Rev. No.
0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG3011L	报告编号 Report No.	B-WR20470
合同号 Contract No.	04-0120F4	部件名称 Items Name	13CE FLOOR BEAM	NDT报告编号 Report No. of NDT	B787-UT-19859
项目编号 Project No.:	ZP06-787				

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: SEG3011L-219

检验员 (Inspector) : Liu Xin (Date) : 2011.03.19
Liu Xin

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): *Ma Rui* 日期(Date): *2011.03.18*

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:
Technical engineer

Nini Tietong

审核:
Approved by

Lu Jianhua

日期
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	SEG3011L	报告编号 Report No.	B-WR20470
合同号 Contract No.:	04-0120F4	部件名称 Items Name	13CE FLOOR BEAM	NDT报告编号 Report No. of NDT	B787-UT-19859
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):

Ma Ruijuan

日期(Date):

2011.03.19

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 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 checked="" 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	Niniefang
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返修(碳刨)前预热温度 Preheat temperature before gouging	200	返修的缺陷 Description of discontinuity	cf
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焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	135°C
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最大碳刨深度 Max. depth of gouging	12mm	碳刨总长 Total length of gouging	230mm
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焊工 welder	051359 2111	焊接类型 welding type	SMAW	焊接位置 position	2G
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焊接电流 Current	150	焊接电压 Voltage	25.4	焊接速度 Speed	118
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**返修后检查
Inspection After repairing:**

外观检查 VT result	Acc	检验员 Inspector	Geigwei 3/28/11	日期 Date	2011.03.26
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NDT复检 NDT result	Acc	探伤员 NDT-person	Liu	日期 Date	2011.05.12
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见证:
Witness/Review:备注:
Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-19859R1 DATE 2011.05.12 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 13CE FLOOR BEAM DRAWING NO.: SEG3011L CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

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

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

EQUIPMENT 设备 MANUFACTURER 制造商 AMERICA MODEL NO. 样式编号 EPOCH 4B SERIAL NO. 序列编号 071566111

CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II COUPLANT 耦合剂 C.M.C MATERIAL/THICKNESS 材料厚度 A709M-345T2 22/20mm

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
SEG3011L-219	1R1	70				36									ACC.	100%
AFTER B-WR20470																
BLANK																

EXAMINED BY 主探 <u>Dan Xian</u> LEVEL - II SIGN / DATE <u>2011.05.12</u>	REVIEWED BY 审核 <u>Tang Xiangshun</u> LEVEL - II SIGN / DATE <u>2011.05.12</u>
质量经理 / QCM <u>[Signature]</u> 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION

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(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, China**Report No:** NCS-000969**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 19-May-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0950**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: 18-Mar-2011**Description of Non-Conformance:**

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Contractor's proposal to correct the problem:

Contractor proposes to repair the notification, submit the NDT report to prove the weld acceptable.

Corrective action taken:

ZPMC repaired the indication and provided NDT reports showing the weld is acceptable. Internal NCR issued to the personnel involved.

Did corrective action require Engineer's approval? **Yes** **No**

If so, name of Engineer providing approval:

Date:

Is Engineer's approval attached?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Yes No

Comments:

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Inspected By:	Ng,Michael	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer
