

**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-000541**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0514**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> OBG Segment 8BW
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Missed UT Indication by QC, Segment 8BW**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector performed 10% verification of Ultrasonic Testing (UT) on the weld between Side Plate to Corner Assembly located at Segment 8BW near panel point 65 (PP65). The QA inspector discovered one (1) class "A" non-conforming indication measuring approximately 15 mm in length.

- The non-conforming indication measured approximately 15mm in length.
- The weld is identified as: SEG045A-001.
- The weld is located between Side Plate SP103A to Corner Assembly CA49A.
- The weld is a Complete Joint Penetration (CJP) Butt Joint.
- The OBG Segment 8BW is located at outside the Paint Shop.
- The Notice of Witness Inspection Number (NWIT) is 004869.
- A TL-6027 UT report was written by QA inspector B205 on this date.

**Applicable reference:**

AWS D1.5-02 Section 6; Table 6.3

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:** Subhasis Bera**Name of individual from Contractor notified:** Peter Shaw**Time and method of notification:** 930 hours, 12-18-09, Verbal**Name of Caltrans Engineer notified:** Bill Howe

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** 1030 hours, 12-18-09, Verbal

**QC Inspector's Name:** Wang Lu

**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Guest,Skylar	SMR
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<b>Reviewed By:</b>	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:** 24-Dec-2009

**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:** 05.03.06-000502

**Subject:** NCR No. ZPMC-0514

**Reference Description:** Missed UT Indication by QC, Segment 8BW

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:** 08

**Remarks:**

The Caltrans Quality Assurance (QA) Inspector performed 10% verification of Ultrasonic Testing (UT) on the weld between Side Plate to Corner Assembly located at Segment 8BW near panel point 65 (PP65). The QA inspector discovered one (1) class "A" non-conforming indication measuring approximately 15 mm in length.

- The non-conforming indication measured approximately 15mm in length.
- The weld is identified as: SEG045A-001.
- The weld is located between Side Plate SP103A to Corner Assembly CA49A.
- The weld is a Complete Joint Penetration (CJP) Butt Joint.
- The OBG Segment 8BW is located at outside the Paint Shop.
- The Notice of Witness Inspection Number (NWIT) is 004869.
- A TL-6027 UT report was written by QA inspector B205 on this date.

**Action Required and/or Action Taken:**

No Action Required. This is a duplicate of NCT 516.

**Transmitted by:** Bill Howe Sr. Transportation Engineer

**Attachments:** ZPMC-0514

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

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000502

**Subject:** NCR No. ZPMC-0514

**Dated:** 18-Jan-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000516 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** As a means of preventing future occurrences, the ABF QCM has performed refresher UT training. See attached UT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher UT training. See attached UT training agenda and attendance roster. The ABF QCM has been discussing missed UT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. ABF has purchased GE Technology transducers to distribute to both ZPMC and ABF UT personnel in a cooperative effort to match the equipment of CT. These transducers will arrive to the job site approximately the end of January 10 at which time they will be put into immediate use. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000516R00;

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### Caltrans' comments:

**Status:** AAP

**Date:** 25-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

**Submitted by:** Chao, Ching

**Attachment(s):**

**Date:** 25-Jan-2010

# UT Refresher Training Agenda

**Subject:** UT Techniques

**Reason for Training:** Several CT NCR's for missed UT indications

**1. Safety**

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical Shock

**2. Tools**

- a. Calibrated UT Machine      condition of machine
- b. Coaxial cable                      condition of cable
- c. Transducer                      condition of transducer
- d. IIW Block
- e. Scraper
- f. UT couplant

**3. Inspection Techniques**

- a. Surface preparation
- b. Location of weld                      UT from beveled plate
- c. Scanning patterns
- d. Correct choice of Angles
- e. Calibration                      per ZPMC procedure at regular intervals
- f. Scanning speed
- g. Know where your sound is at.... First leg, second leg etc...

**4. Inspection Criteria**

- a. Table 6.3 or Table 6.4
- b. Are surface inspections complete    VT and or MT should always occur before UT
- c. Scanning Levels
- d. Criteria dictated by the thinner of the two members
- e. Planar flaws



教育培训纪录

培训编号:

培训内容:	UT复习培训教程 UT Techniques
培训对象:	ZPMC UT GUYS
授课人员:	STEVE LAWTON
培训类型:	UT Refresher Training Agenda
培训时间:	2009. 12. 24. 16:30
计划培训地点:	ZPMC NDT OFFICE

人员签到:

姓名	部门	姓名	部门
戴斌 Dai Goufeng	江江 Jiang Jiang		
薛宇 Xuellamang	黄廷 Huang Ting		
马志长 Majizhang	黄廷 Huang Ting		
谭善 Tanxingshan	李黎明 Li Liming		
马健 Majian	李黎明 Li Liming		
王福 Wangfu	徐坤 Xu Kun		
沈健 Sheng Jian	李黎明 Li Liming		
黄宇 Huang Yu			
金峰 Jin Feng			
吴文 Wu Wen			
解文 Jie Wen			
周海周 Zhou Hai			
徐峰 Xu Feng			

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000502

**Subject:** NCR No. ZPMC-0514

**Dated:** 15-Mar-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000516 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has repaired the weld in question and is providing the repair documents as well as NDT to show that weld is now acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the weld in question and is providing the repair documents as well as NDT to show that weld is now acceptable. In addition, ZPMC has written its own internal NCR to document the non conformance. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000516R01;

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### Caltrans' comments:

**Status:** CLO

**Date:** 17-Mar-2010

The documentation received is sufficient to close this NCR.

**Submitted by:** Howe, Bill

**Date:** 17-Mar-2010

**Attachment(s):**



No. B-673

## LETTER OF RESPONSE

**TO:** American Bridge/Flour

**DATE:** 2010-3-15

**REGARDING:** NCR-000541(ZPMC-0514) NCR-000543(ZPMC-0516)

ZPMC acknowledged this problem and has issued internal NCR to warn the same cases. Repair has been completed. ZPMC is providing WRRs and NDT records show the welds are acceptable after repair. Based on this, ZPMC requests closure of this NCR.

**ATTACHMENT:**

NCR-000541(ZPMC-0514)

NCR-000543(ZPMC-0516)

B-WR9615

B787-UT-10506 R1

A handwritten signature in black ink, appearing to be "Jing Wu", is written below the attachment list.

3/15/10

WR9615 10506

施



# 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-356(ZPMC-0514) / 2PMC-566	
Item: missed UT indication 名称描述: UT 漏检	Item Number: 件号: N/A	Drawing: 图号: N/A	
Location: outside yard 位置: 外场		Date: 日期: 2009-12-31	

**Description of Nonconformance:**

不符合项状态描述:

The CT QA inspector performed 10% verification of UT on the weld between side plate to corner assembly located at segment 8bw near panel point 65(PP65), The QA inspector discovered I class A non-conforming indication measuring approximately 15mm in length.

加州检验员在进行 10% UT 检测的时候发现了在斜底板与角连接板 8BW, QA 发现了一个 A 级缺陷监测大约长度 15 毫米。

漏检长度大约为 15 毫米。

焊缝编号为 SEG045A-001。

位置在 SP103A 与角单元 CA49A。

该焊缝为 CJP。

8BW 当时在冲砂车间外部。

此事情焊工 004869 进行见证。

此 UT 是被 B205 检测出来的。

Work By: Liliming 10.03.14 Prepared by: Liliming 09.12.31 Reviewed by QCE: Luyankun

施工方: 准备: 质量工程师批准:

Drawing Error 图纸错误   
  Material Defect 材料缺陷   
  Fabrication Error 制作错误   
  Other 其他原因 12/31/09

Disposition:  Use as is 回用     Repair 返修     Reject 拒收

处理措施:

**Recommendation:**

建议:

确认, 根据报告进行返修

Repair according to report.

Prepared by: Liliming 10.03.14 Approved by QCA: \_\_\_\_\_

准备 质量经理批准

Reason for Nonconformance:

不符合原因:

A级缺陷, UT漏检.

UT discover class A defect.

Prevention of Re-occurrence:

预防措施:

加强UT人员的责任心.

Improve UT responsibility.

Approved by/批准:

L. Liming 10.3.11

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:

\_\_\_\_\_



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: 24-Dec-2009

Contract No: 04-0120F4

Dear: Mr. Charles Kanapicki  
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager  
 Subject: NCR No. ZPMC-0514

04-SF-80-13.2 / 13.9  
 Job Name: SAS Superstructure  
 Document No: 05.03.06-000502

Reference Description: Missed UT Indication by QC, Segment 8BW

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: 08

**Remarks:**

The Caltrans Quality Assurance (QA) Inspector performed 10% verification of Ultrasonic Testing (UT) on the weld between Side Plate to Corner Assembly located at Segment 8BW near panel point 65 (PP65). The QA inspector discovered one (1) class "A" non-conforming indication measuring approximately 15 mm in length.

- The non-conforming indication measured approximately 15mm in length.
- The weld is identified as: SEG045A-001.
- The weld is located between Side Plate 92103A to Corner Assembly CA49A.
- The weld is a Complete Joint Penetration (CJP) Butt Joint.
- The OBG Segment 8BW is located at outside the Paint Shop.
- The Notice of Witness Inspection Number (NWIT) is 904869.
- A TL-6027 UT report was written by QA inspector B205 on this date.

**Action Required and/or Action Taken:**

Provide a repair procedure to the engineer for approval. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0514

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao  
 File: 05.03.06

**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-000541**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0514**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural Joint fit-up  Coating  Other Procedural  Procedural  Description: **Bridge No:** 34-0006**Component:** OBG Segment 8BW**Reference Description:** Missed UT Indication by QC, Segment 8BW**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector performed 10% verification of Ultrasonic Testing (UT) on the weld between Side Plate to Corner Assembly located at Segment 8BW near panel point 65 (PP65). The QA inspector discovered one (1) class "A" non-conforming indication measuring approximately 15 mm in length.

-The non-conforming indication measured approximately 15mm in length.

-The weld is identified as: SEG045A-001.

-The weld is located between Side Plate SP103A to Corner Assembly CA49A.

-The weld is a Complete Joint Penetration (CJP) Butt Joint.

-The OBG Segment 8BW is located at outside the Paint Shop.

-The Notice of Witness Inspection Number (NWIT) is 004869.

-A TL-6027 UT report was written by QA inspector B205 on this date.

**Applicable reference:**

AWS D1.5-02 Section 6; Table 6.3

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:** Subhasis Bera**Name of individual from Contractor notified:** Peter Shaw**Time and method of notification:** 930 hours, 12-18-09, Verbal**Name of Caltrans Engineer notified:** Bill Howe

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 2 of 2 )

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**Time and method of notification:** 1030 hours, 12-18-09, Verbal

**QC Inspector's Name:** Wang Lu

**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Guest, Skyler

SMR

**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: 24-Dec-2009

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-0516

Job Name: SAS Superstructure  
Document No: 05.03.06-000504

Reference Description: Missed UT Indication by QC, Segment 8BW

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: 08

### Remarks:

During the Quality Assurance Ultrasonic Testing (UT) review of the internal components of OBG Segment 8BW, this Quality Assurance Inspector (QA) discovered the following issues:

- A total of one (1) UT Class "A" indication in the complete joint penetration (CJP) splice weld of side plate SP103A to SP435A that measured a total of 15mm in length. The weld is designation is SEG045A-001.
- OBG Segment 8BW is located in the segment repair yard north of the blast shop.
- The NDT notification sheet number is 004869. The indication is located inside of the area previously tested and accepted by ZPMC Quality Control (QC) personnel.

### Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Ensure that the ZPMC UT technicians have training and equipment necessary to perform UT inspection so as not to miss class A indications. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0516

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao  
File: 05.03.06

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



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.25B

Bay Area Branch  
 690 Walnut Ave. St. 150  
 Vallejo, CA 94592-1133  
 (707) 649-5453  
 (707) 649-5493

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000543

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Dec-2009

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

NCR #: ZPMC-0516

### Type of problem:

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: OBG Segment 8BW  
 Procedural  Procedural  Description:

Reference Description: Missed UT Indication by QC, Segment 8BW

### Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of the internal components of OBG Segment 8BW, this Quality Assurance Inspector (QA) discovered the following issues:

- A total of one (1) UT Class "A" indication in the complete joint penetration (CJP) splice weld of side plate SP103A to SP435A that measured a total of 15mm in length. The weld is designation is SEG045A-001.
- OBG Segment 8BW is located in the segment repair yard north of the blast shop.
- The NDT notification sheet number is 004869. The indication is located inside of the area previously tested and accepted by ZPMC Quality Control (QC) personnel.

### Applicable reference:

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."

AWS D1.5 Section 6.26.3.1; "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4."

AWS D1.5-02 Section 6; Table 6.3

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peter Shaw

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 2 of 2 )

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**Time and method of notification:** 930 hours, 12-18-09, Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 1430 hours, 12-18-09, Verbal

**QC Inspector's Name:** Wang Lu

**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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Guest, Skyler

SMR

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**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	SEG045A	报告编号 Report No.	B-WR9615
合同号 Contract No.	04-0120F4	部件名称 Items Name	CORNER ASSEMBLY SIDE PLATE	NDT报告编号 Report No.of NDT	B787-UT-10506
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

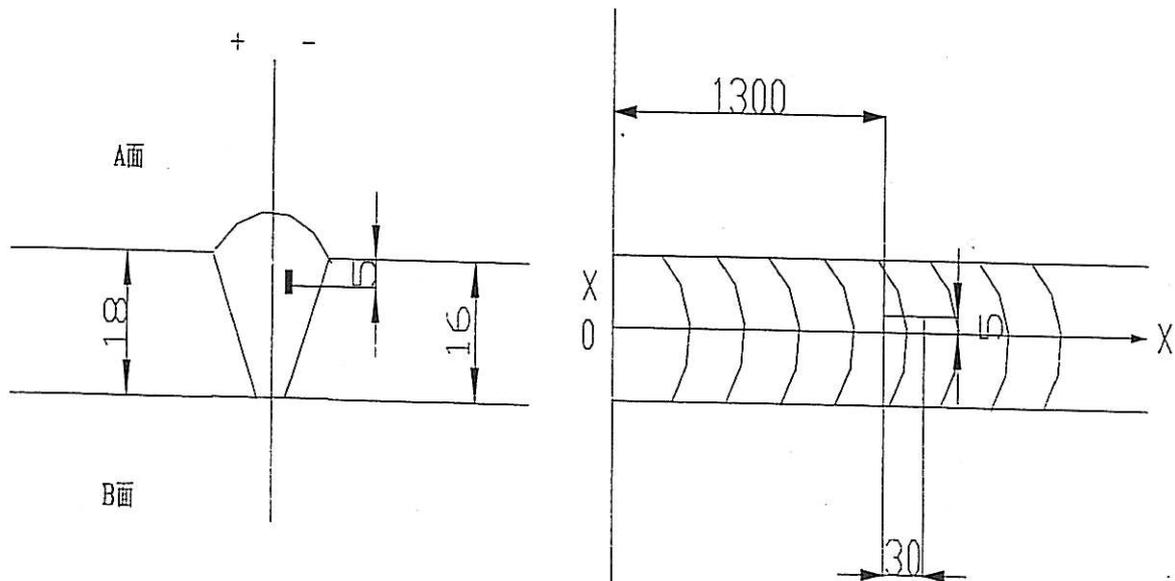
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG045A-001

检验员 (Inspector) *Huang Jing* 日期(Date): 09.12.29

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG045A-001

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): *Lizhiqiang* 日期(Date): 12.30

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  
Date

12.30



# 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	SEG045A	报告编号 Report No.	B-WR9615
合同号 Contract No.:	04-0120F4	部件名称 Items Name	CORNER ASSEMBLY SIDE PLATE	NDT报告编号 Report No. of NDT	B787-UT-10506
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): *Lizhiqiang* 日期(Date): 12-30

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>Hexiaolin</i> 12-30
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>125</i>	返修的缺陷 Description of discontinuity	<i>ZF</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>125</i>
最大碳刨深度 Max. depth of gouging	<i>7</i>	碳刨总长 Total length of gouging	<i>200</i>
焊工 welder	<i>044772</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>182</i>	焊接电压 Voltage	<i>245</i>
		焊接位置 position	<i>16</i>
		焊接速度 Speed	<i>188</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>Zhang Honghai</i> <i>0702/01</i>
		日期 Date	<i>2010.3.9</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Huang Jing</i>
		日期 Date	<i>10.3.9</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-10506R1-2      DATE 2010.03.09      PAGE 1 OF 1      Revision No: 0

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

ITEMS NAME: COENER ASSEMBLY FLOOR BEAM SPLICE      DRAWING NO.: 8BW      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      BUTT      Dec. 28<sup>ST</sup>, 2010

EQUIPMENT 设备      MANUFACTURER 制造商      MODEL NO. 样式编号      SERIAL NO. 序列编号  
 UT SCOPE      PANAMETRICS      EPOCH-4B      071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块      COUPLANT 耦合剂      MATERIAL/THICKNESS 材料厚度  
 AWS IIV BLOCK TYPE II      C.M.C      A709M-345T2-X      30/20mm

### 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
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	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	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
SEG045A-001	1R1	70				32								ACC.	100%

AFTER B-WR9615

BLANK


EXAMINED BY 主探 Wang Jiny 2010.03.09      REVIEWED BY 审核 Wu Hao 2010.03.09  
 LEVEL - I SIGN / DATE      LEVEL - II SIGN / DATE

质量经理 / QCM      用户 CUSTOMER  
 签字 SIGN / 日期 DATE      签字 SIGN / 日期 DATE



**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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000425**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0514**Type of problem:**

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

**Date the Non-Conformance Report was written:** 18-Dec-2009**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector performed 10% verification of Ultrasonic Testing (UT) on the weld between Side Plate to Corner Assembly located at Segment 8BW near panel point 65 (PP65). The QA inspector discovered one (1) class "A" non-conforming indication measuring approximately 15 mm in length.

- The non-conforming indication measured approximately 15mm in length.
- The weld is identified as: SEG045A-001.
- The weld is located between Side Plate SP103A to Corner Assembly CA49A.
- The weld is a Complete Joint Penetration (CJP) Butt Joint.
- The OBG Segment 8BW is located at outside the Paint Shop.
- The Notice of Witness Inspection Number (NWIT) is 004869.
- A TL-6027 UT report was written by QA inspector B205 on this date.

**Contractor's proposal to correct the problem:**

This issue will be addressed in ZPMC-0516.

**Corrective action taken:**

Documentation to be provided in ZPMC-0516 as this is a duplicated NCR.

**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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# QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**Inspected By:** Tsang, Eric

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer