

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

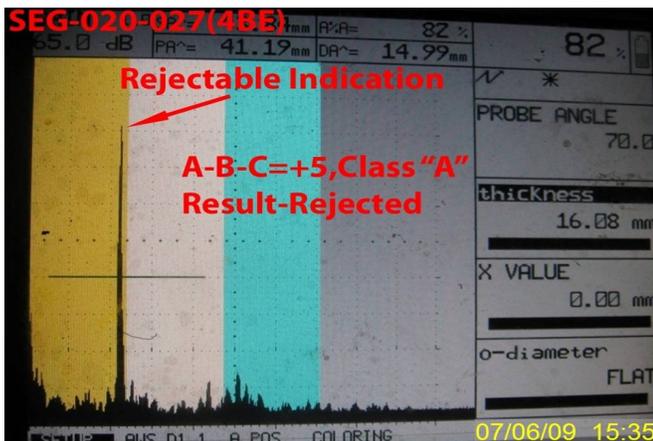
Quality Assurance and Source Inspection



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, PRC**Report No:** NCR-000351**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Jul-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0325**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** OBG Segment 4BE**Procedural****Procedural****Description:****Reference Description:** Missed UT 4BE**Description of Non-Conformance:**

Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG-020-027 of OBG Segment 4BE. QA Inspector discovered One class "A" rejectable indication measuring approximately 35 mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date.

**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.”

Who discovered the problem: Subhasis Bera**Name of individual from Contractor notified:** Kevin Chen**Time and method of notification:** 15:10, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 9:00, 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 Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	QA Inspector
Reviewed By:	Wahbeh,Mazen	SMR



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: 05-Aug-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: 05.03.06-000331

Subject: NCR No. ZPMC-0325

Reference Description: Missed UT 4BE

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:** 04

Remarks:

Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG-020-027 of OBG Segment 4BE. QA Inspector discovered One class "A" rejectable indication measuring approximately 35 mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date.

Action Required and/or Action Taken:

This work has already repaired according to the approved procedure.

Transmitted by: Bill Howe

Attachments: ZPMC-0325

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, 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: 05.03.06-000331

Subject: NCR No. ZPMC-0325

Dated: 24-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000324 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has notified ZPMC of the missed MT indications and ZPMC has completed the necessary repairs. ABF is also conducting an investigation of why ZPMC is experiencing cracking of welds.

ABF has notified ZPMC of the missed MT indications and ZPMC has completed the necessary repairs. ABF has taken action by hiring several MT technicians to perform overchecks of several types of welds due to the amount of missed indications. ABF is also conducting an investigation of why ZPMC is experiencing cracking of welds. This investigation is being performed by both onsite ABF personnel as well as welding experts hired by ABF for this purpose. Recently CT has brought in their own welding consultant to discuss ABF findings and preventive actions. Preventive actions such as increased preheats have been discussed with ZPMC. When the investigation is completed, ABF will submit the findings to ZPMC and CT. ABF will continue to perform overchecks until we are sure this issue is corrected and preventive actions are implemented. ZPMC will submit the repair documents at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000324R00

Caltrans' comments:

Status: AAP

Date: 31-Aug-2009

The response is acceptable, but the Non-Conformance is not closed. Non-Conformance ZPMC-0325 was issued for GC missing an indication during Ultrasonic Testing (UT), not MT as mentioned above.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0325 at that time.

Submitted by: Wright, Doug

Date: 31-Aug-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000331

Subject: NCR No. ZPMC-0325

Dated: 04-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000324 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has included documentation supporting successful repair and NDT documentation of this weld.

The actual weld joint indentified in the NCR should be SEG020A-025. ZPMC has included documentation supporting successful repair and NDT documentation of this weld. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000324R01;

Caltrans' comments:

Status: CLO

Date: 01-Dec-2009

The documentation submitted has been reviewed by the Engineer and is found to be acceptable.

Submitted by: Chao, Ching

Date: 01-Dec-2009

Attachment(s):



No. B-487

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-11-04

REGARDING: NCR-000351 (ZPMC-0325)

With this letter of response, ZPMC requests closure for Caltrans NCR-000351 (ZPMC-0325). Per requirement of the NPR, we are providing the documentation of the weld repairs that were performed and that the repairs were acceptable.

so base on the above explanation, ZPMC applies to close the caltrans's report NCR-000351 (ZPMC-0325).

Please reference attached document for acceptance and closure the NCR-000351 (ZPMC-0325).

ATTACHMENT:

NCR-000351 (ZPMC-0325)

ZPMC internal NCR

The weld repair report

The acceptable UT report

Zhao Shuangbo

2009. 11. 4.



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-222 (ZPMC-0325)
Item: Missed UT 4BE 名称描述: 4BE UT 漏检	Item Number: 件号: OBG 4BE	Drawing: 图号: OBG SEG020
Location: OBG 4BE 位置:		Date: 日期: 2009-8-12
Description of Nonconformance: 不符合项状态描述: SEG020A-025 Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG020-027 of OBG Segment 4BE. QA Inspector discovered "A" rejectable indication measuring approximately 35mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date. 加州检验员在 4BE 箱体, 焊缝 SEG020-027 上做 10% UT 抽检时发现一 35 毫米长的 A 类缺陷。此焊缝之前已经由 ZPMC 的 UT 检验员验收合格。		
Work By: 施工方: <i>[Signature]</i>	Prepared by: <i>[Signature]</i> 准备: 2009.8.13	Reviewed by QCE: <i>[Signature]</i> 质量工程师批准: 8/13/09
<input type="checkbox"/> Drawing Error <input checked="" type="checkbox"/> Material Defect <input checked="" type="checkbox"/> Fabrication Error <input type="checkbox"/> Other 图纸错误 材料缺陷 制作错误 其他原因		
Disposition: <input type="checkbox"/> Use as is <input type="checkbox"/> Repair <input type="checkbox"/> Reject 处理措施: 回用 返修 拒收		
Recommendation: 建议: <i>[Handwritten]</i> Repair after affirmation.		
Prepared by: <i>[Signature]</i> 准备: 2009.8.13		Approved by QCA: _____ 质量经理批准
Reason for Nonconformance: 不符合原因: <i>[Handwritten]</i> Discover defects.		
Prevention of Re-occurrence: 预防措施: <i>[Handwritten]</i> Enhance instrument correction and enhance inspection.		
Approved by/批准: <i>[Signature]</i> 2009.8.13		

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

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: 05-Aug-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: 05.03.06-000331
Subject: NCR No. ZPMC-0325
Reference Description: Missed UT 4BE

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- 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: 04

Remarks:

Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG-020-027 of OBG Segment 4BE. QA Inspector discovered One class "A" rejectable indication measuring approximately 35 mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date.

Action Required and/or Action Taken:

This work has already repaired according to the approved procedure.

Transmitted by: Bill Howe

Attachments: ZPMC-0325

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, 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

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 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

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, PRC

Report No: NCR-000351

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 06-Jul-2009

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

NCR #: ZPMC-0325

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

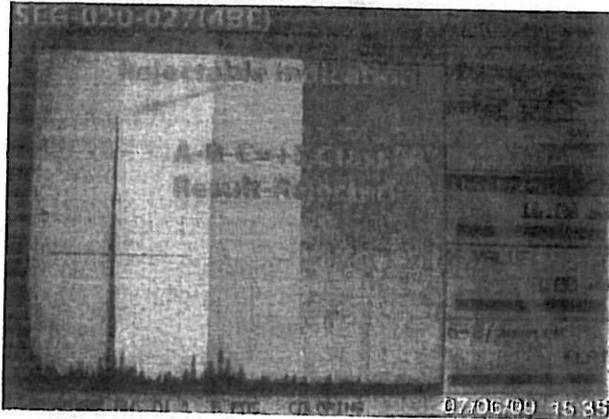
Bridge No: 34-0006

Component: OBG Segment 4BE

Reference Description: Missed UT 4BE

Description of Non-Conformance:

Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG-020-027 of OBG Segment 4BE. QA Inspector discovered One class "A" rejectable indication measuring approximately 35 mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date.



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."

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 15:10, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 9:00, 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

QA Inspector

Reviewed By: Wahbeh, Mazen

SMR



焊缝返修报告

版本
Rev. No.:

0

Welding Repair Report

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	OBE4	报告编号 Report No.:	B-WR5708
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	4BE北侧底板与斜底 板4BE north botto m plate and side plate	NDT 报告编号 DT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

经检查发现4BE北侧底板与斜底板拐角处对接缝平整度超差达4~14mm, 总长约600mm. 其焊缝编号为SEG020A-025.

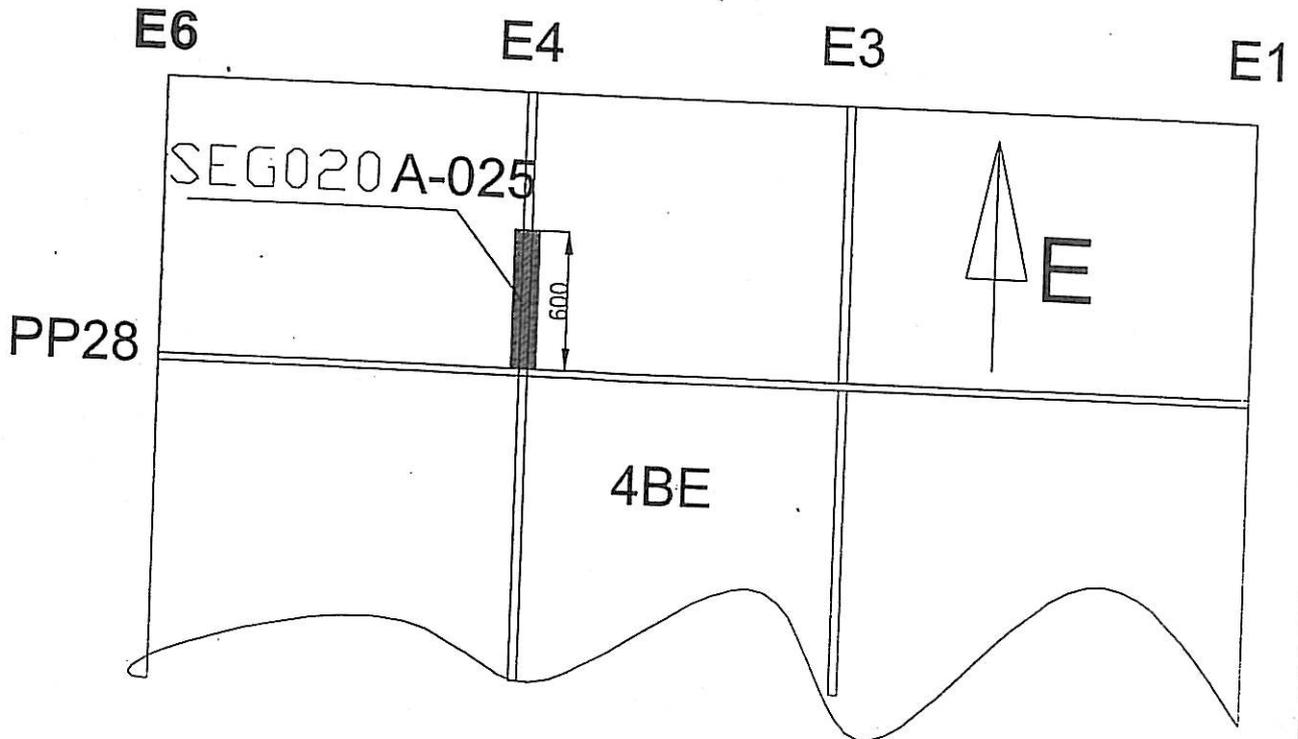
The flatness was 4-14mm at 4BE bottom plate and side plate, 600mm in length, weld No: SEG020A-025.

检验员 (Inspector): *Wang zhu*
wang zhu

日期 (Date): 2009.06.21

焊缝返修位置示意图:

Draft of Welding Discontinuity:



产生原因:

Cause:

焊接变形和制作误差。

Weld distortion and fabricate error.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

09.06.24

处理意见

Disposition :

1. 采用碳刨或切割方法将平整度超差位置纵桁与底板焊缝割开L, 其次割开底板与斜底板平整底超差区域主焊缝L' (注: L、L'切割长度可根据现场实际平整度超差情况进行确定), 碳刨前应根据相应的WPS进行预热;
 2. 根据相应返修WPS准备正确的焊接接头型式, 并预制底板 (斜底板)、纵桁坡口;
 3. 借用外力 (如工艺撑、卡码等) 固定住底板与斜底板以保证平面度满足公差要求;
 4. 对焊接修补区域进行VT检测确认无缺陷存在;
 5. 根据批准的返修WPS焊接底板与斜底板焊缝, 并随时检测底板与斜底板平整度, 其次焊接纵桁与箱梁底板焊缝;
 6. 将返修处焊缝打磨与周边焊缝或母材平齐;
 7. 根据图纸要求进行检测。
1. Remove L weld between longitudinal diaphragm and bottom plate by use of gouging or cutting, remove L' weld between bottom plate and side plate, (Remark: the length(L、L') was according to flatness condition on site), preheat according to approved WPS before gouging;
 2. Prepare a right joint and make the groove of bottom plate(side plate) and longitudinal diaphragm;
 3. Fix bottom plate and side plate by use of force(such as technology strut, fixture) to ensure flatness;
 4. Perform VT to ensure the repair area free of defects before repair;
 5. Weld bottom plate and side plate weld according to approved WPS, inspect bottom plate and side plate weld flatness, then weld between longitudinal diaphragm and box side plate;
 6. Grind repair area flush with adjacent weld or base metal;
 7. Perform inspection according to drawing requirement.

工艺:

Technical Engineer:

Nin Tiefen

审核:

Approved By:

日期:

Date: 09.06.24



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.:	OBE4	报告编号 Report No.:	B-WR5708
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	4BE北侧底板与斜底 板4BE north botto m plate and side plate	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

加强制作过程中的监控, 减少误差。

Enhance supervision in process of fabricate to reduce error.

车间负责人 (Foreman): *Li zhigang* 日期 (Date):*09.06.24*

参照的WPS编号 Repair WPS No.:	WPS-345-SMAW-1G(1F)-Repair WPS-345-FCAW-1G(1F)-Repair-1 WPS-345-FCAW-1G(1F)-FCM-Repair WPS-345-SMAW-4G(4F)-FCM-Repair WPS-345-FCAW-2G(2F)-FCM-Repair	工艺员 Technologist:	<i>Niu Trefaj</i> <i>09.06.24</i>
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返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	<i>110°C</i>	返修的缺陷 Description of Discontinuity:	<i>NA</i>
焊前处理检查 Inspection Before Welding:	<i>Acc</i>	焊前预热温度 Preheat Temperature Before Welding:	<i>80°C</i>
最大碳刨深度 Max. Depth of Gouge:	<i>NA</i>	碳刨总长 Total Length of Gouge:	<i>600</i>

焊工 Welder:	<i>Z20069/068097</i>	焊接类型 Welding Type:	<i>FLAW SMAW</i>	焊接位置 Position:	<i>16.46</i>
焊接电流 Current:	<i>300</i> <i>145</i>	焊接电压 Voltage:	<i>30.5</i> <i>22.5</i>	焊接速度 Speed:	<i>290</i> <i>105</i>

返修后检查
Inspection After Repair:

外观检查 VT Result:	<i>Acc</i>	检验员 Inspector:	<i>Wu zhi chen</i>	日期 Date:	<i>09.06.27</i>
NDT复检 NDT Result:	<i>Acc</i>	探伤员 NDT Person:	<i>金建廷</i>	日期 Date:	<i>09.07.10</i>

见证:
Witness/Review:备注:
Remark:

#R787-QCP-900

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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, PRC**Report No:** NCS-000274**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0325**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: 06-Jul-2009**Description of Non-Conformance:**

Caltrans Quality Insurance (QA) Inspector performed 10% verification Ultrasonic Testing (UT) after Heat Straightening area on weld joint SEG-020-027 of OBG Segment 4BE. QA Inspector discovered One class "A" rejectable indication measuring approximately 35 mm in length. This weld was previously tested and accepted by ZPMC QC UT technicians. See UT report for this date.

Contractor's proposal to correct the problem:

Contractor has acknowledged that this item must be addressed, and the item was added to the Master Punchlist.

Corrective action taken:

Work was completed and item was cleared on Master Punchlist by Caltrans on. Submittal of documentation by Contractor being tracked on Documentation Punchlist.

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 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**