

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-000287**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0261**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Suspender Bracket SB003-026
Procedural	Procedural	Description:	

Reference Description: Missed UT by QC, Weld SB003-026-061**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector performed verification ultrasonic testing (UT) on Weld Joint SB003-026-061 for Suspender Bracket SB003-026. QA Inspector discovered a class "A" rejectable indication measuring approximately 120mm in length. This weld was previously tested and accepted by ZPMC Quality Control UT technicians.

**Applicable reference:**

AWS D1.5-02 Section 6 Table 6.3

Who discovered the problem: Subhasis Bera**Name of individual from Contractor notified:** Chang Baoqan**Time and method of notification:** 05.27.2009, 18:20, Verbal**Name of Caltrans Engineer notified:** Stanley Ku, Ching Chao**Time and method of notification:** 05.28.2009, 18:45, Email**QC Inspector's Name:** Zhuzhong Hai

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest,Skyler	SMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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: 02-Jun-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: 05.03.06-000252

Subject: NCR No. ZPMC-0261

Reference Description: Missed UT by QC, Weld SB003-026-061

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:

Caltrans Quality Assurance (QA) Inspector performed verification ultrasonic testing (UT) on Weld Joint SB003-026-061 for Suspender Bracket SB003-026. QA Inspector discovered a class "A" rejectable indication measuring approximately 120mm in length. This weld was previously tested and accepted by ZPMC Quality Control UT technicians.

Action Required and/or Action Taken:

Quality Control UT technicians missing rejectable indications have been a recurring QC issue that constitutes a systematic problem in quality control. Please provide a response for the resolution of this issue within 14 days.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0261

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, 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: 05.03.06-000252

Subject: NCR No. ZPMC-0261

Dated: 13-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000254 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has notified ZPMC NDT supervisor to verify with the UT operator this indication can be detected. Also, ZPMC was instructed to verify equipment is working properly.

ABF has notified ZPMC NDT supervisor to verify with the UT operator this indication can be detected. Also, ZPMC was instructed to verify equipment is working properly, such as transducer and transducer cable. ZPMC to provide an evaluation and inspection reports at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000254R00

Caltrans' comments:

Status: AAP

Date: 15-Jul-2009

The response is acceptable, but the Non-Conformance is not closed.

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-0261 at that time.

Submitted by: Wright, Doug

Date: 15-Jul-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000252

Subject: NCR No. ZPMC-0261

Dated: 27-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000254 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000254R01;

Caltrans' comments:

Status: CLO

Date: 10-Aug-2009

The proposed resolution is acceptable. The welding repair report is included, and the weld in question has been accepted by VT and UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0261 is closed.

Submitted by: Wright, Doug

Date: 10-Aug-2009

Attachment(s):



No. B-415

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-23

REGARDING: NCR-000287 (ZPMC-0261)

With this letter of response, ZPMC requests closure for Caltrans NCR-000287 (ZPMC-0261). Per the comments of the NPR from caltrans that "please provide documentation of the weld repairs that were performed and that the repairs were acceptable", we submit the letter with the attached report to support the good quality of the corresponding structures and complete with the NDT inspection.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report NCR-000287 (ZPMC-0261).

Please reference attached documentation for acceptance and closure the NCR-000287 (ZPMC-0261).

ATTACHMENT:

NCR-000287 (ZPMC-0261)

ZPMC internal NCR

The closed welding repair report

The final VT/UTT report

Zhao Shuangbao

2009. 7. 23.



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-170 (ZPMC-261)

Item: Missed UT by QC
名称描述: UT 漏检

Item Number:
件号:
OBG

Drawing:
图号: SB003

Location: OBG SB003-026
位置:

Date:
日期: 2009-06-06

Description of Nonconformance:

Caltrans Quality Assurance (QA) Inspector performed verification ultrasonic testing (UT) on weld joint SB003-026-061 for Suspender Bracket SB003-026. QA Inspector discovered a class "A" rejectable indication measuring approximately 120mm in length. This weld was previously tested and accepted by ZPMC Quality Control UT technicians.

加洲在对悬索支架上的焊缝 SB003-026-061 做 UT 复探的时候, 发现一个长 120 毫米的 A 类缺陷, 这条焊缝之前已经被 ZPMC 的检验员 UT 接受。

Work By: LSL Liming
施工方: 2009.06.12

Prepared by: Shen Xuejun
准备: 2009.6.6

Reviewed by QCE: Lu Jianhua
质量工程师批准: 2009.6.6

- Drawing Error Material Defect Fabrication Error Other
 图纸错误 材料缺陷 制作错误 其他原因

- Disposition: Use as is Repair Reject
 处理措施: 回用 返修 拒收

Recommendation:

建议: 复检后出具返修报告
Re-inspection and issue repair report.

Prepared by: LSL Liming
准备: 2009.06.12

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因: 缺陷大小与加洲检测相比有误差, 产生漏检。
The defect size error with caltrans inspection caused undiscover defect.

Prevention of Re-occurrence:

预防措施: 规范操作程序, 减少人员仪器所产生的误差。
Perform according to operation procedure and reduce error artificial error.

Approved by/批准: W L Wang
2012.06.12

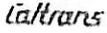
Technical Justification for Use-As-Is/Repair: Attachment Non-attachment
回用或返修的技术依据: 附件 无附件

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
 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: 02-Jun-2009

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0261
Document No: 05.03.06-000252

Reference Description: Missed UT by QC, Weld SB003-026-061

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- Non-Conformance Resolved.

Material Location: OBG

Lift:

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Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0261

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Ching Chao

File: 05.03.06

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

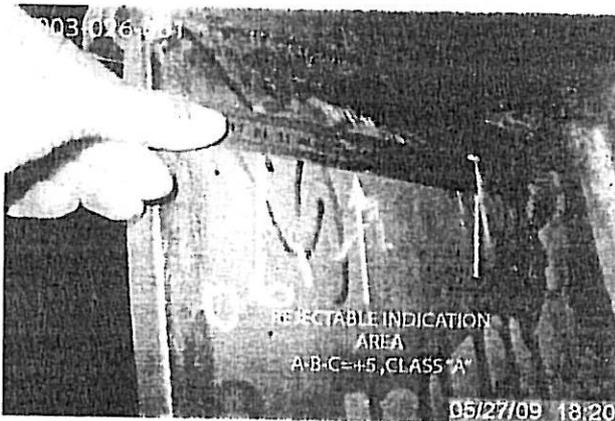
Office of Structural Materials

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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, P.R. China**Report No:** NCR-000287**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0261**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description: **Bridge No:** 34-0006**Component:** Suspender Bracket SB003-026**Reference Description:** Missed UT by QC, Weld SB003-026-061**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector performed verification ultrasonic testing (UT) on Weld Joint SB003-026-061 for Suspender Bracket SB003-026. QA Inspector discovered a class "A" rejectable indication measuring approximately 120mm in length. This weld was previously tested and accepted by ZPMC Quality Control UT technicians.

**Applicable reference:**

AWS D1.5-02 Section 6 Table 6.3

Who discovered the problem: Subhasis Bera**Name of individual from Contractor notified:** Chang Baoqan**Time and method of notification:** 05.27.2009, 18:20, Verbal**Name of Caltrans Engineer notified:** Stanley Ku, Ching Chao**Time and method of notification:** 05.28.2009, 18:45, Email**QC Inspector's Name:** Zhuzhong Hai

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

Comments:

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Inspected By: Guest, Skyler 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	SB3-SB26W	报告编号 Report No.	B-WR5491
合同号 Contract No.:	04-0120F4	部件名称 Items Name	SUPPORT BEAM	NDT报告编号 Report No. of NDT	B787-UT-7025
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

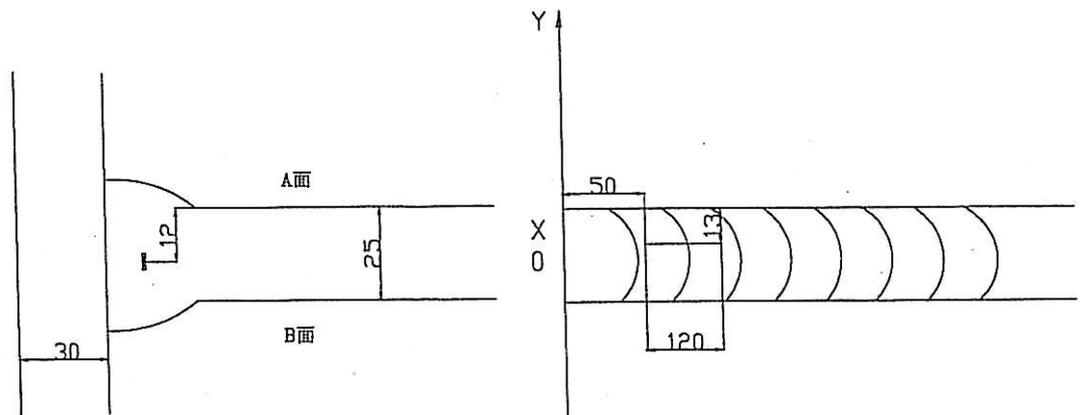
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。)SB003-026-061

检验员 (Inspector): Han Feng 日期(Date): 09.06.10

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SB003-026-061

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 Guiming* 日期(Date): *09.06.15*

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: *Niu Tefeng*
Technical engineer *09.06.15*

审核: *Lu Zuo*
Approved by

日期
Date *09.06.15*



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	SB3-SB26W	报告编号 Report No.	B-WR5491
合同号 Contract No.:	04-0120F4	部件名称 Items Name	SUPPORT BEAM	NDT报告编号 Report No. of NDT	B787-UT-7025
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): Zhang Guiming 日期(Date): 09.06.15

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1	工艺员 technologist	Min Tilteng 09.06.15
返修(碳刨)前预热温度 Preheat temperature before gouging	No	返修的缺陷 Description of discontinuity	slag
焊前处理检查 Inspection before welding	An	焊前预热温度 Preheat temperature before welding	low
最大碳刨深度 Max. depth of gouging	13	碳刨总长 Total length of gouging	150
焊工 welder	062763	焊接类型 welding type	FCAW
焊接电流 Current	275	焊接电压 Voltage	298
		焊接位置 position	26
		焊接速度 Speed	too
返修后检查 Inspection After repairing:			
外观检查 VT result	Acc	检验员 Inspector	Liu Faxuan 08126531
		日期 Date	09.06.16
NDT复检 NDT result	Acc	探伤员 NDT person	Huang Feng
		日期 Date	09.6.17
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



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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, P.R. China**Report No:** NCS-000283**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0261**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: 27-May-2009**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector performed verification ultrasonic testing (UT) on Weld Joint SB003-026-061 for Suspender Bracket SB003-026. QA Inspector discovered a class "A" rejectable indication measuring approximately 120mm in length. This weld was previously tested and accepted by ZPMC Quality Control UT technicians.

Contractor's proposal to correct the problem:

Train personnel on the importance in interpass cleaning.

Corrective action taken:

Repaired weld in accordance with approved CWR and submitted MT reports.

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 For additional information 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