

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-000238**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Mar-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0212**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** Segment 1BE: Floor Beam to Bottom Plate**Procedural****Procedural****Description:****Reference Description:** QA Inspector found additional MT indications**Description of Non-Conformance:**

During random verification Magnetic Particle Testing (MT) of floor beam to bottom plate weld numbers SSD45-PP10.5-107, SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance (QA) Inspector discovered a total of eight (8) transverse linear indications ranging from 10 to 30mm in length. These linear indications were not found when Contractor performed 25% MT inspections.

**Applicable reference:**

AWS D1.5 (2002) - Section 6.26.2, "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Rodney Patterson**Name of individual from Contractor notified:** Peter Shaw**Time and method of notification:** 03/28/2009, 1530 hours, Verbal**Name of Caltrans Engineer notified:** Stanley Ku**Time and method of notification:** 03/29/2009, 1300 hours, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name: Li Yan Hua

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, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	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: 06-Apr-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 Manager - OBG

Document No: 05.03.06-000205

Subject: NCR No. ZPMC-0212

Reference Description: QA Inspector found additional MT indications

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 random verification Magnetic Particle Testing (MT) of floor beam to bottom plate weld numbers SSD45-PP10.5-107, SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance (QA)Inspector discovered a total of eight (8) transverse linear indications ranging from 10 to 30mm in length.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0212

cc: Rick Morrow, Gary Pursell, Brian Boal, 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: 05.03.06-000205

Subject: NCR No. ZPMC-0212

Dated: 18-May-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000209 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has generated an internal NCR for this nonconformance, repaired and re-inspected the welds as required. ZPMC requests this NCR be closed.

ZPMC has generated an internal NCR for this nonconformance, repaired and re-inspected the welds as required. Attached is documentation of work performed regarding this NCR. ZPMC requests this NCR be closed.

Submitted by:

Attachment(s): ABF-NPR-000209R00;

Caltrans' comments:

Status: AAP

Date: 25-May-2009

The response is acceptable, but the Non-Conformance is not closed. The attached documentation includes the training that was provided, but does not include documentation of repairs performed or acceptable NDT reports.

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-0212 at that time.

Submitted by: Wright, Doug

Date: 25-May-2009

Attachment(s):



No. B-341

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-5-7

REGARDING: NCR-000242/000237/000238 (ZPMC-0216/0211/0212)

With this letter of response, ZPMC requests closure for caltrans' NCR-000242/000237/000238 (ZPMC-0216/0211/0212) . we have instructed our NDT operators with the requirement of AWS, especially for the checks and calibration of equipment, and as the additional we add up the some weld NDT inspection to 100 percent, but we have to point out that some of the indication in the NCR description did not in the random of the ZPMC's inspection areas.

We have done the new inspection for all of the indication areas until not any defects was been founded.

Basic on the attached documentation we apply to close the caltrans's NCR-000242/000237/000238 (ZPMC-0216/0211/0212) ,all of the final NDT report should be proved the good quality for the corresponding welds.

Please check the attached documentation for acceptance and close the NCR-000242/000237/000238 (ZPMC-0216/0211/0212) .

ATTACHMENT:

ZPMC internal NCR

NCR-000242/000237/000238 (ZPMC-0216/0211/0212)

The final complete VT/MT/UT inspection report

The reports for the weld repair

Lujianhua 5/15/09



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: ZPMC-0212
NCR 编号: NCR-B-138 (NCR-000238)

Item: MT indications
名称描述: MT 漏检

Item Number:
件号:

Drawing:
图号: 1BE

Location:
位置: 1BE

Date:
日期: 2009-04-15

Description of Nonconformance:

During random verification Magnetic Particle Testing of floor beam to bottom plate weld numbers SSD45-PP10.5-107 ,SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance inspector discovered a total of eight transverse linear indications ranging from 10 to 30mm in length. These linear indications were not found when Contractor performed 25% MT inspections.

加州检验员在对隔板和底板焊缝 SSD45-PP10.5-107 ,SSD49-PP12-106 和 SSD49-PP12-107 做 MT 抽检时一共发现 8 处裂纹, 长度为 10 到 30mm 不等, 这些裂纹在 ZPMC QC 做 25% 的 MT 时却并未发现。

Work By: <u>L.L. Liming</u>	Prepared by: <u>Wanghu</u>	Reviewed by QCE: <u>Zhao Shuangbao</u>
施工方: <u>2009.04.24</u>	准备: <u>2009.4.15</u>	质量工程师批准: <u>4.15</u>
<input type="checkbox"/> Drawing Error	<input type="checkbox"/> Material Defect	<input checked="" type="checkbox"/> Other
图纸错误	材料缺陷	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

隔板与底板焊缝 100% MT 复检, 对抽检产生的裂纹出具不合格报告, 进行返修。
Perform 100% MT at floor beam and bottom plate, and issue CWI R when found cracks, then repair.

Recommendation:

建议: 加强焊接及控制, 加强 NDT 人员技术培训。
Enhance welding and controlling and train to improve NDT personnel technology and skill.

Prepared by: L.L. Liming
准备: 2009.04.24

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因: 1. NDT人员漏检.

2. CT人员抽检不在ZPMC检验区域内.

1. NDT personnel didn't inspect transverse linear indication.

2. The area CT inspector inspected wasn't in the ZPMC random inspection area.

Prevention of Re-occurrence:

预防措施:

加强业务培训, 提高检测能力, 扩大检测比例, 加强复检.

Enhance training to improve ability of inspection and enlarge inspection rate and re-inspection.

Approved by/批准: Li Liming 2019.4.24

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
666 Feng Bln 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: 06-Apr-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 Manager - OBG

Document No: 05.03.06-000205

Subject: NCR No. ZPMC-0212

Reference Description: QA Inspector found additional MT indications

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 random verification Magnetic Particle Testing (MT) of floor beam to bottom plate weld numbers SSD45-PP10.5-107, SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance (QA) Inspector discovered a total of eight (8) transverse linear indications ranging from 10 to 30mm in length.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0212

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, Ching Chao

File: 05.03.06

11

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 #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000238

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 28-Mar-2009

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

NCR #: ZPMC-0212

Type of problem:

Welding **Concrete** **Other**

Welding **Curing** **Procedural**

Joint fit-up **Coating** **Other**

Procedural **Procedural** **Description:**

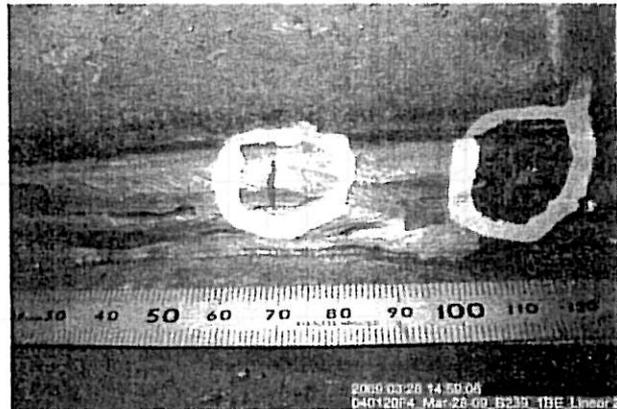
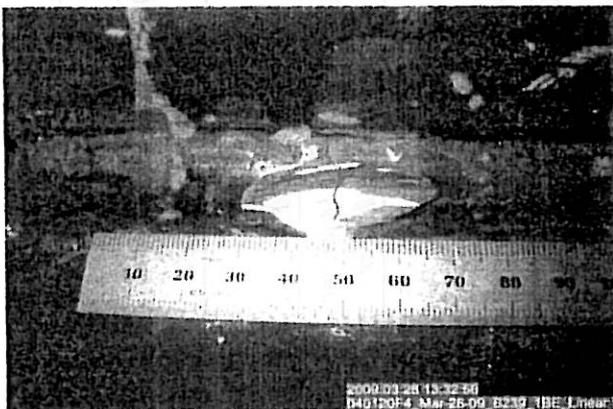
Bridge No: 34-0006

Component: Segment 1BE: Floor Beam to Bottom Plate

Reference Description: QA Inspector found additional MT indications

Description of Non-Conformance:

During random verification Magnetic Particle Testing (MT) of floor beam to bottom plate weld numbers SSD45-PP10.5-107, SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance (QA) Inspector discovered a total of eight (8) transverse linear indications ranging from 10 to 30mm in length. These linear indications were not found when Contractor performed 25% MT inspections.



Applicable reference:

AWS D1.5 (2002) - Section 6.26.2, "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Rodney Patterson

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 03/28/2009, 1530 hours, Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 03/29/2009, 1300 hours, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name: Li Yan Hua

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, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



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-137 (NCR-000237)	
Item: A Class "A" indication was not found by QC UT Technician 名称描述: UT 漏检		Item Number: 件号: CB5	Drawing Number: 图号: CB202D
Location: 位置: OBG CB5		Date: 日期: 2009-4-15	
Description of Nonconformance: 不符合项状态描述: During an UT on weld joint CB202D-001-001, Caltrans QA inspector discovered class "A" non conforming indications measuring approximately 20mm in length. This weld was previously tested and accepted by ZPMC QC UT Technicians. 焊缝 CB202D-001-001 已经由 ZPMC 的 UT 检验员检验合格, 但是加州检验员在对此焊缝做 UT 复探的时候发现一个 20mm 长的 "A 类" 缺陷。			
Work By: <u>L. Liming</u> Prepared by: <u>S. Knejer</u> Reviewed by QCE: <u>[Signature]</u> 4.15. 施工方: <u>2009.04.15</u> 准备: <u>2009.4.15</u> 质量工程师批准:			
<input type="checkbox"/> Drawing Error <input type="checkbox"/> Material Defect <input type="checkbox"/> Fabrication Error <input checked="" 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: <u>复检, 返修. Inspection again then repair.</u>			
Prepared by: <u>L. Liming</u> Approved by QCA: _____ 准备: <u>2009.04.15</u> 质量经理批准			
Reason for Nonconformance: 不符合原因: <u>因超声波 dB 数差异, 导致 "A" 类缺陷漏检.</u> For the discrepancy in dB caused class A defect.			
Prevention of Re-occurrence: 预防措施: <u>加强现场控制, 减少 dB 误差.</u> Enhance controlling on-site to reduce dB error.			
Approved by/批准: <u>L. Liming 2009.04.15</u>			
Technical Justification for Use-As-Is/Repair: <input type="checkbox"/> Attachment <input type="checkbox"/> Non-attachment 回用或返修的技术依据: 附件 无附件			
Reviewed /批准: _____			
Verification: <input type="checkbox"/> Acceptable <input type="checkbox"/> 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
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: 06-Apr-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 Manager - OBG

Document No: 05.03.06-000204

Subject: NCR No. ZPMC-0211

Reference Description: A Class "A" indication was not found by QC UT Technician

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 an Ultrasonic Testing (UT) on weld joint CB202D-001-001, Caltrans Quality Assurance (QA) Inspector discovered class "A" non conforming indications measuring approximately 20mm in length. This weld was previously tested and accepted by ZPMC Quality Control (QC) UT Technicians.

Action Required and/or Action Taken:

A response for the resolution of this issue is expected within 14 days.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0211

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, 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 #: 04-0120F4

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

File #: 69.25B

**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000237**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Mar-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0211**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG Segment 3AW: CB202D-001-001Procedural Procedural Description: Quality Control UT Inspection**Reference Description:** A Class "A" indication was not found by QC UT Technician**Description of Non-Conformance:**

During an Ultrasonic Testing (UT) on weld joint CB202D-001-001, Caltrans Quality Assurance (QA) Inspector discovered class "A" non conforming indications measuring approximately 20mm in length. This weld was previously tested and accepted by ZPMC Quality Control (QC) UT Technicians.

Applicable reference:

AWS D1.5 (2002) - Section 6, Table 6.3

Who discovered the problem: Hiranch Patel**Name of individual from Contractor notified:** Lou Weng**Time and method of notification:** 03/28/2009, 1030 hours, Verbal**Name of Caltrans Engineer notified:** Stanley Ku**Time and method of notification:** 03/29/2009, 1300 hours, Verbal**QC Inspector's Name:** Haung Wen Pang**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, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



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-139 (NCR-00242)

Item: MT indications
名称描述: MT 漏检

Item Number:
件号:

Drawing:
图号:3AE

Location:
位置: 3AE

Date:
日期: 2009-04-15

Description of Nonconformance:

On March 10,2009,ZPMC Quality Control representative Mr. Wang Lu notified Caltrans Quality Assurance inspector of the re-inspection of the corner assembly components by Magnetic Particle Testing of the linear indications discovered by QA inspectors on Segment 3AE Green Tag #8.Caltrans QA performed MT the second time on the following corner assembly welds:CSD4-PP22-069,CSD4-PP22-071,CSD4-PP22-073 andCSD4-PP22-134.Caltrans QA Inspector discovered additional linear indications ranging from 10 to 25 mm long.

3.10号 ZPMC 通知加州检验员对 3AE TAG#8 中角单元处做 MT 后再次发现裂纹,加州 QA 在第二次做 MT 发现以下焊缝有裂纹: CSD4-PP22-069,CSD4-PP22-071,CSD4-PP22-073 和 CSD4-PP22-134, 长度在 10~25 mm 不等。

Work By: LL Jimmy
施工方: 2009.04.14

Prepared by: Wang Lu
准备: 2009.4.15

Reviewed by QCE: [Signature]
质量工程师批准: [Signature]

Drawing Error
图纸错误

Material Defect
材料缺陷

Fabrication Error
制作错误

Other
其他原因

Disposition: Use as is
处理措施: 回用

Repair
返修

Reject
拒收

扩大比例检测,对有裂纹的地方进行返修。

Enlarge inspection rate, and repair the crack area.

Recommendation:

建议:

加强NDT人员培训,降低检测速度。

Train NDT personnel and reduce inspection speed.

Prepared by: LL Jimmy
准备: 2009.04.14

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因:

- 1. NDT人员漏检,
- 2. 角单元修补后未进行检测,

- 1. NDT personnel didn't inspect transverse linear indication.
- 2. Didn't inspect after fixing corner assembly.

Prevention of Re-occurrence:

预防措施:

加强NDT人员业务培训, 严格控制MT检测时机, 保证在焊缝完全完工后再检测。

Train NDT personnel and controlling inspect time. it should be inspection after finishing fixing welds.

Approved by/批准: LS Liming 2024.04.24

Technical Justification for Use-As-Is/Repair:
回用或返修的技术依据:

Attachment
附件

Non-attachment
无附件

Reviewed /批准: _____

Verification: Acceptable
确认: 可接受

Unacceptable
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
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: 06-Apr-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 Manager - OBG

Document No: 05.03.06-000208

Subject: NCR No. ZPMC-0216

Reference Description: QC failed to recognize linear indications by MT

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:

On March 10, 2009, ZPMC Quality Control (QC) representative Mr. Wang Lu notified Caltrans Quality Assurance (QA) inspector of the re-inspection of the corner assembly components by Magnetic Particle Testing (MT) of the linear indications discovered by QA inspectors on Segment 3AE Green Tag #8. Caltrans QA performed MT the second time on the following corner assembly welds: CSD4-PP22-069, CSD4-PP22-071, CSD4-PP22-073 and CSD4-PP22-134. Caltrans QA Inspector discovered additional linear indications ranging from 10 to 25mm long.

Action Required and/or Action Taken:

A response for the resolution of this issue is expected within 14 days.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0216

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, 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 #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000242

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Mar-2009

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

NCR #: ZPMC-0216

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

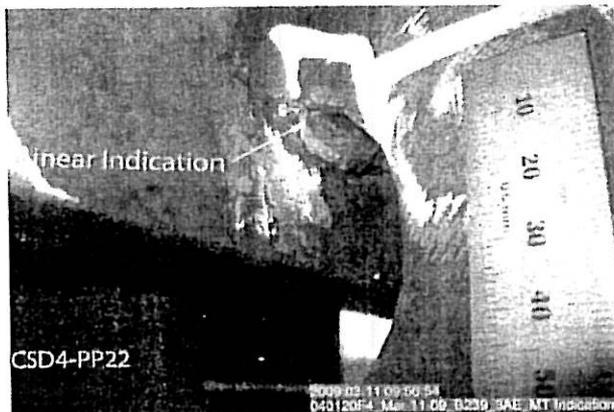
Bridge No: 34-0006

Component: Segment 3AE Corner Assembly

Reference Description: QC failed to recognize linear indications by MT

Description of Non-Conformance:

On March 10, 2009, ZPMC Quality Control (QC) representative Mr. Wang Lu notified Caltrans Quality Assurance (QA) inspector of the re-inspection of the corner assembly components by Magnetic Particle Testing (MT) of the linear indications discovered by QA inspectors on Segment 3AE Green Tag #8. Caltrans QA performed MT the second time on the following corner assembly welds: CSD4-PP22-069, CSD4-PP22-071, CSD4-PP22-073 and CSD4-PP22-134. Caltrans QA Inspector discovered additional linear indications ranging from 10 to 25mm long.



Applicable reference:

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Who discovered the problem: Rodney Patterson

Name of individual from Contractor notified: Man Kit Li

Time and method of notification: 03/11/09, 1600 hours, In person

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 03/11/09, 1830 hours, In person

QC Inspector's Name: Li Yan Hua

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, +(86) 150.0042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



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-141 (NCR-00241)

Item: Unapproved welder
 was performing base metal
 repairs
 名称描述: 未经批准的焊工
 进行母材返修

Item Number:
 件号:

Drawing:
 图号: X8E

Location:
 位置: 4BE

Date:
 日期: 2009-04-16

Description of Nonconformance:

Quality Assurance (QA) Inspector observed a ZPMC personnel performing the base metal repair on an X8E (stiffener plate) for Segment 4BE. The following issues were found by the QA Inspector.

-Unapproved and non-certified welder was performing the SMAW base metal repairs. The name of this person is Hu Zhan Ling (worker's ID# 208493)

-No welding repair was done without a welding repair report.

-Quality Control (QC) did not find that the person welding is a non-certified and unapproved welder.

Therefore, the welding of the X8E Plate/stiffener was done not according to the project requirement.

QA 检验员看到 ZPMC 的焊工对梁段 4BE 上的 X8E 筋板进行母材返修。他发现了以下几点问题:

- 1、 未经批准并未被认可的焊工在用 SMAW 进行母材返修。他的名字是 Hu Zhan Ling, 工号 208493。
- 2、 返修时没有返修报告。
- 3、 QC 没有发现这个焊工是未经批准并未被认可的。

所以, 对 X8E 筋板的焊接是没有根据项目要求进行的。

Work By:
 施工方: 施东刚
 Drawing Error
 图纸错误

Prepared by: Fu Yuhong
 准备: 2009.4.16
 Material Defect
 材料缺陷

Reviewed by QCE: zhuoshoungbao
 质量工程师批准:
 Fabrication Error
 制作错误
 Other
 其他原因 4.16

Disposition:
 处理措施: Use as is
 回用

Repair
 返修

Reject
 拒收

Recommendation:

建议: 严格控制无证焊接, 现QC要加强监督
 Enhance controlling un-qualification welder and supervision by Qe.

Prepared by: 李志刚
 准备: Li Zhigang

Approved by QCA:
 质量经理批准

Reason for Nonconformance:

不符合原因:

现场安排人员没有合理审核焊工资质, 在返修时没有及时通知现场QC.

Didn't review welder qualification before arrangement welder, and didn't note QC during repair.

Prevention of Re-occurrence:

预防措施:

加强对现场施工的监管, 尤其是现场安排生产人员, 严格控制焊工资质和焊接质量.

Enhance management work team, and arrangement work person, and controlling welder qualification and quality.

Approved by/批准: 李志刚

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

加强对现场施工的监管, 严格控制焊工资质和焊接质量, 对相关人员进行培训.

Enhance management work team on-site, and controlling welder qualification and quality and train relevant personnel.

Reviewed/批准: Tang Yanbo

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
 666 Feng Bin Road Room 708, Changxing Island
 Shanghai 201913 PR China
 Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMLRIC AN BRIDGE FLUOR, A JV
 375 BURMA ROAD
 OAKLAND CA 95607

Date: 07-Apr-2009

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project Manager - OBG
 Subject: NCR No. ZPMC-0215

Job Name: SAS Superstructure
 Document No: 05.03.06-000210

Reference Description: Unapproved non-certified welder was performing base metal repairs

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:

Quality Assurance (QA) Inspector observed a non-certified welder, Hu Zhan Ling, worker ID# 208493, performing the SMAW base metal repairs on an X8E (stiffener plate) for Segment 4BJE without a welding repair report. Quality Control (QC) failed to identify non-certified welder performing weld repairs.

Action Required and/or Action Taken:

Base metal repairs performed by a non certified welder shall be removed. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Stanley Ku Sr. Bridge Engineer
 attachments: ZPMC-0215

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, 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 #: 04-0120F4

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

File #: 69.25B



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000241

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 23-Mar-2009

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

NCR #: ZPMC-0215

Type of problem:

Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:

Bridge No: 34-0006

Component: X8E Plate/Stiffener - Segment 4BE

Reference Description: Unapproved/non-certified welder was performing base metal repairs

Description of Non-Conformance:

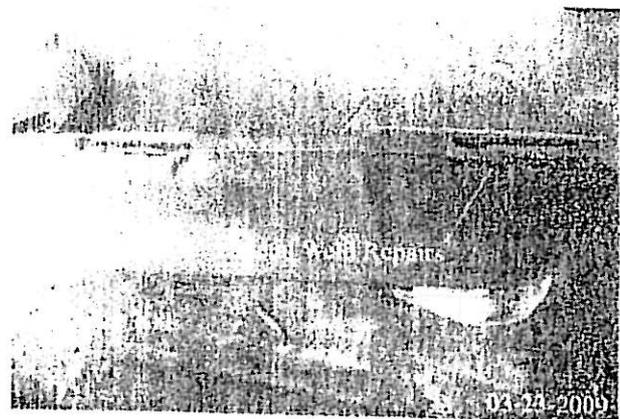
Quality Assurance (QA) Inspector observed a ZPMC personnel performing the base metal repairs on an X8E (stiffener plate) for Segment 4BE. The following issues were found by the QA Inspector:

-Unapproved and non-certified welder was performing the SMAW base metal repairs. The name of this person is Hu Zhan Ling (worker's ID# 208493).

-No welding repair was done without a welding repair report.

-Quality Control (QC) did not find that the person welding is a non-certified and unapproved welder.

Therefore, the welding of the X8E Plate/Stiffener was done not according to the project requirement.



Applicable reference:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

AWS D1.5 2002- paragraph 6.4.1: "The inspector shall allow welding to be performed only by the welders, welding operators, and tack welders who are qualified."

AWS D1.5 2002- paragraph 5.24.2.2: "A change in the position of welding to one for which the welder is not already qualified shall require requalification."

Who discovered the problem: Mahlon Lindemuth

Name of individual from Contractor notified: Ren Zhensheng

Time and method of notification: 1100 hrs - Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1130 hrs - Verbal

QC Inspector's Name: Shi Lei

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, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000205

Subject: NCR No. ZPMC-0212

Dated: 08-Jun-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000209 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has attached the required documentation and requests closure of this NCR. See attached documentation.
ZPMC has attached the required documentation and requests closure of this NCR. See attached documentation.

Submitted by:

Attachment(s): ABF-NPR-000209R01;

Caltrans' comments:

Status: CLO

Date: 24-Jun-2009

The proposed resolution is acceptable. The welds in question have been accepted by VT and MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0212 is closed.

Submitted by: Wright, Doug

Date: 24-Jun-2009

Attachment(s):

NCR PROPOSED RESOLUTION

To: California Department of Transportation
333 Burma Road
Oakland, CA 94607
Attention: Pursell, Gary
Resident Engineer
Ref: 05.03.06-000205
Subject: NCR No. ZPMC-0212

Dated: 18-May-2009
Contract No.: 04-0120F4
04-SF-80-13.2/13.9
Job Name: Self-Anchored Suspension Bridge
Document No: ABF-NPR-000209 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has generated an internal NCR for this nonconformance, repaired and re-inspected the welds as required. Attached is documentation of work performed regarding this NCR. ZPMC requests this NCR be closed.

Submitted By:

Attachment(s): ABF-NPR-000209R00;

Caltrans' comments:

Status: AAP

Date: 25-May-2009

The response is acceptable, but the Non-Conformance is not closed. The attached documentation includes the training that was provided, but does not include documentation of repairs performed or acceptable NDT reports.

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-0212 at that time.

Submitted By: Wright, Doug

Date: 25-May-2009

Attachment(s):

ZPMC-0212
CWR + VT/MT
reports



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG006A	报告编号 Report No.:	B-CWR452
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	PLATE PANEL SPLICE	NDT 报告编号 NDT Report No.:	B787-MT-8742
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

A transverse crack was detected by MT in weld SSD45-PP10.5-107. Please see the Draft below.
(MT探伤发现焊缝上有1处横向裂纹。)

① L=13mm, Y=85mm

Welder ID No. (焊工编号): 044837

Position:(位置): 2F

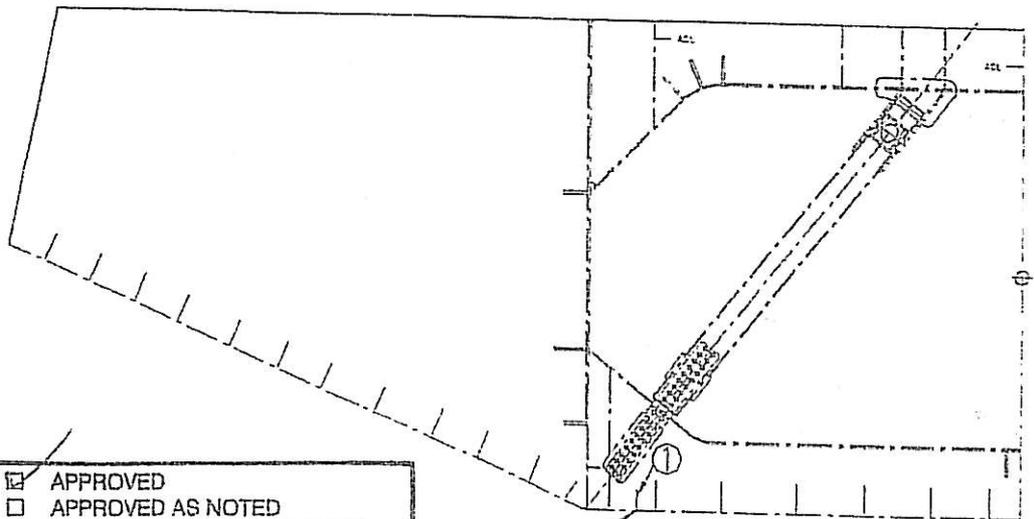
Gu Yunwu

检验员 (Inspector): Gu Yunwu

日期 (Date): 2009.03.28

焊缝返修位置示意图:

Draft of Welding Discontinuity:



- APPROVED
 - APPROVED AS NOTED
 - RETURNED FOR CORRECTION
- Pursuant to Section 5-1.02
of the Standard Specifications
State of California

DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction

[Signature] 3/31/09
Structure Representative / Date

SSD45-PP10.5-107/106

产生原因:

Cause:

1. 火焰加热时, 水汽没有完全的去掉或者这个区域预热不够;
1. Moisture wasn't completely removed during drying operation (preheating) or the area wasn't preheated sufficiently.

车间负责人 (Foreman):

Lizhigang

日期 (Date):

07.31.09

处理意见

Disposition:

1. 整个返修过程中, QC和Leader CWI检测所有的碳刨, 打磨和焊接;
2. 在返修时, QC和Leader CWI必须在现场, 有CWR的复印件;
3. QC和Leader CWI应该指导返修, 以保证按照返修的处理意见进行;
4. 按照返修的WPS准备正确的接头型式;
5. 打磨去除缺陷;
6. 将返修区域打磨光滑, 使焊接接头开始和结束交错布置;
7. VT和MT检测所有的缺陷全部去除;
8. QC和Leader CWI确认报告上的缺陷已经全部去除;
9. 按照返修的WPS进行预热和焊接;
10. 在进入下到焊道焊接前, QC和Leader CWI目检时, 应该加强焊道;
11. 返修后, VT, MT检测, 保证焊缝没有缺陷;
12. 打磨返修后的焊缝与母材和焊缝平齐;
13. 按照图纸要求检测焊缝。

<input checked="" type="checkbox"/>	APPROVED
<input type="checkbox"/>	APPROVED AS NOTED
<input type="checkbox"/>	RETURNED FOR CORRECTION
Pursuant to Section 5-1.02 of the Standard Specifications State of California	
DEPARTMENT OF TRANSPORTATION	
Division of Engineering Services	
Office of Structure Construction	
<i>[Signature]</i>	<i>3/31/09</i>
Structure Representative	Date

1. QC and a Lead CWI shall be present and direct all gouging, grinding and welding operations during this repair.
2. QC and a Lead CWI shall have an approved copy of the CWR in hand and shall be at the repair location during the entire repair.
3. QC and a Lead CWI shall direct the repair to ensure the repair is per the disposition requirements.
4. Prepare the repair joint according to the relevant repair WPS.
5. Remove all indications by grinding.
6. Grind repair areas smooth to a shiny finish with tapered ends to ensure staggered stops and starts.
7. Perform VT and MT inspection.
8. QC and a Lead CWI shall verify and document all indications have been removed prior to repair welding.
9. Follow the repair WPS for preheat and weld deposition.
10. QC and a Lead CWI shall enforce interpass cleaning by performing a visual inspection prior to the deposition of each pass.
11. Perform VT and MT inspections after welding.
12. Grind and blend the repaired area flush with base metal and adjacent weld.
13. Check the welds according to the working drawings.

工艺:

Technical Engineer:

Nina Tiefel

审核:

Approved By:

Lufianhua

日期:

Date:

07.31.09



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG006A	报告编号 Report No.:	B-CWR452
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	PLATE PANEL SPLICE	NDT 报告编号 NDT Report No.:	B787-MT-8742
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1. 返修前, QC确认有效的预热, 以将水汽全部去除.

1. QC shall verify sufficient preheat has been applied, to remove moisture, prior to welding.

车间负责人 (Foreman): *Li Zhigang*

日期 (Date): 2009.3.29

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:	<i>Min Trefang</i> 09.03.29
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	75°C	返修的缺陷 Description of Discontinuity:	Crack
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	175°C
最大碳刨深度 Max. Depth of Gouge:	4mm	碳刨总长 Total Length of Gouge:	40mm
焊工 Welder:	<i>Zhao Shanlin</i> 066683	焊接类型 Welding Type:	FCAW
焊接电流 Current:	304A	焊接电压 Voltage:	277V
		焊接位置 Position:	2G
		焊接速度 Speed:	278 mm/min

返修后检查

Inspection After Repair:

外观检查 VT Result:	<i>Am</i>	检验员 Inspector:	<i>Li Yanhua</i>	日期 Date:	09.04.01
NDT复检 NDT Result:	<i>Am</i>	探伤员 NDT Person:	<i>Jun Jun</i>	日期 Date:	09.04.03
见证: Witness/Review:					
备注: Remark:					

APPROVED
 APPROVED AS NOTED
 RETURNED FOR CORRECTION
 Pursuant to Section 5-1.02
 of the Standard Specifications
 State of California
 DEPARTMENT OF TRANSPORTATION
 Division of Engineering Services
 Office of Structure Construction
Jin Jun 3/31/09
 Structure Representative Date

#R787-QCP-900



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG006A	报告编号 Report No.:	B-CWR451
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	PLATE PANEL SPLICE	NDT 报告编号 NDT Report No.:	B787-MT-8741
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

In welds SSD49-PP12-106/107/108/109/110, a transverse crack was detected by MT in each weld. X, Y show the distance on X, Y axis.

(MT探伤发现5条焊缝上各有1处横向裂纹。)

In welds SSD49-PP12-106/107/108/109/110, transverse cracks were detected by MT in each weld. Please see the detail position in the sketch below. The details are as following.

(MT探伤发现5条焊缝上有横向裂纹。)

- ① SSD49-PP12-106 L1=12mm, Y1=35mm; L2=13mm, Y2=80mm.
- ② SSD49-PP12-107 L1=13mm, Y1=50mm; L2=12mm, Y2=410mm.
- ③ SSD49-PP12-108 L1=12mm, Y1=50mm; L2=14mm, Y2=350mm.
- ④ SSD49-PP12-109 L=14mm, Y=150mm.
- ⑤ SSD49-PP12-110 L1=11mm, Y1=50mm; L2=13mm, Y2=325mm; L3=12mm, Y3=380mm.

Welder ID No. (焊工编号): 044837

Position:(位置): 2F

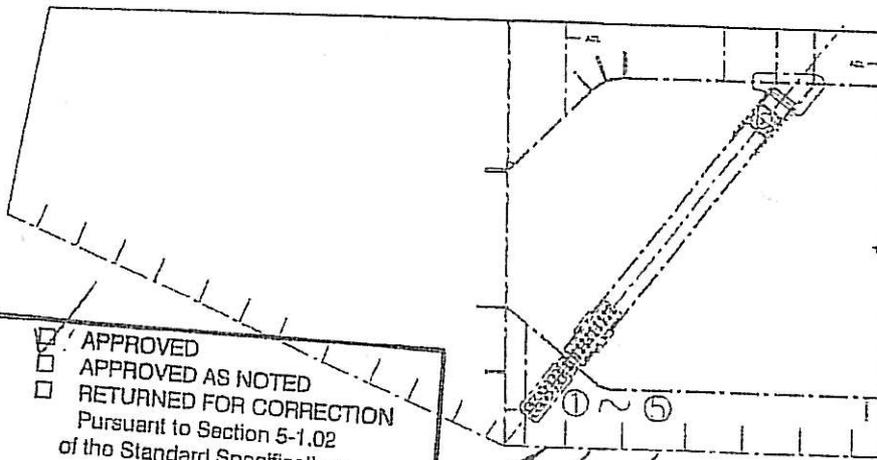
检验员 (Inspector):

Gu Yunwu

日期 (Date): 2009.03.28

焊缝返修位置示意图:

Draft of Welding Discontinuity:



APPROVED
 APPROVED AS NOTED
 RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
of the State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Services
Office of Structure Construction

Structure Representative: Gu Yunwu
Date: 3/28/09

SSD49-PP12-111/110
SSD49-PP12-109/108
SSD49-PP12-107/106

产生原因:

Cause:

1. 火焰加热时, 水汽没有完全的去掉或者这个区域预热不够;
1. Moisture wasn't completely removed during drying operation (preheating) or the area wasn't preheated sufficiently.

车间负责人 (Foreman):

Li Zhigang

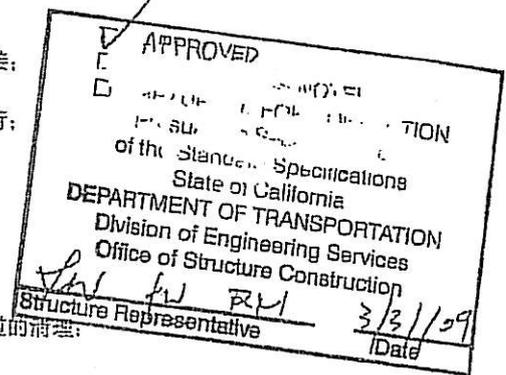
日期 (Date):

09.03.28

处理意见

Disposition:

1. 整个返修过程中, QC和Leader CWI检测所有的碳刨, 打磨和焊接;
2. 在返修时, QC和Leader CWI必须在现场, 有CWR的复印件;
3. QC和Leader CWI应该指导返修, 以保证按照返修的处理意见进行;
4. 按照返修的WPS准备正确的接头型式;
5. 打磨去除缺陷;
6. 将返修区域打磨光滑, 使焊接接头开始和结束交错布置;
7. VT和MT检测所有的缺陷全部去除;
8. QC和Leader CWI确认报告上的缺陷已经全部去除;
9. 按照返修的WPS进行预热和焊接;
10. 在进入下道焊道焊接前, QC和Leader CWI目检时, 应该加强焊道的清理;
11. 返修后, VT, MT检测, 保证焊缝没有缺陷;
12. 打磨返修后的焊缝与母材和焊缝平齐;
13. 按照图纸要求检测焊缝。



1. QC and a Lead CWI shall be present and direct all gouging, grinding and welding operations during this repair.
2. QC and a Lead CWI shall have an approved copy of the CWR in hand and shall be at the repair location during the entire repair.
3. QC and a Lead CWI shall direct the repair to ensure the repair is per the disposition requirements.
4. Prepare the repair joint according to the relevant repair WPS.
5. Remove all indications by grinding.
6. Grind repair areas smooth to a shiny finish with tapered ends to ensure staggered stops and starts.
7. Perform VT and MT inspection.
8. QC and a Lead CWI shall verify and document all indications have been removed prior to repair welding.
9. Follow the repair WPS for preheat and weld deposition.
10. QC and a Lead CWI shall enforce interpass cleaning by performing a visual inspection prior to the deposition of each pass.
11. Perform VT and MT inspections after welding.
12. Grind and blend the repaired area flush with base metal and adjacent weld.
13. Check the welds according to the working drawings.

工艺:

Technical Engineer:

M. J. [Signature]

审核:

Approved By:

L. J. [Signature]

日期:

Date:

09.03.29

		关键焊缝返修报告 Critical Welding Repair Report (CWR)			版本 Rev. No.:
					0
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG006A	报告编号 Report No.:	B-CWR451
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	PLATE PANEL SPLICE	NDT 报告编号 NDT Report No.:	B787-MT-8741
项目编号 Project No.:	ZP06-787				
纠正措施: Corrective Action to Prevent Re-occurrence: 1. 返修前, QC确认有效的预热, 以将水汽全部去除。 1. QC shall verify sufficient preheat has been applied, to remove moisture, prior to welding.					
车间负责人 (Foreman): <i>Li Zhigang</i>		日期 (Date): 2009.3.29			
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:	<i>Niu Trefej</i> 09.03.29		
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	<i>68°C</i>	返修的缺陷 Description of Discontinuity:	<i>crack</i>		
焊前处理检查 Inspection Before Welding:	<i>Acc</i>	焊前预热温度 Preheat Temperature Before Welding:	<i>190°C</i>		
最大碳刨深度 Max. Depth of Gouge:	<i>4.5mm</i>	碳刨总长 Total Length of Gouge:	<i>180mm</i>		
焊工 Welder:	<i>Zhao Shunlin</i> <i>066683</i>	焊接类型 Welding Type:	<i>FCAW</i>	焊接位置 Position:	<i>2G</i>
焊接电流 Current:	<i>307A</i>	焊接电压 Voltage:	<i>30.1V</i>	焊接速度 Speed:	<i>290mm/min</i>
返修后检查 Inspection After Repair:					
外观检查 VT Result:	<i>Acc</i>	检验员 Inspector:	<i>Li Yanhua</i>	日期 Date:	<i>09.04.01</i>
NDT复检 NDT Result:	<i>Acc</i>	探伤员 NDT Person:	<i>Li Yanhua</i>	日期 Date:	<i>09.04.03</i>
见证: Witness/Review:	<div style="border: 1px solid black; padding: 5px;"> <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> APPROVED AS NOTED <input type="checkbox"/> RETURNED FOR CORRECTION Pursuant to Section 5-1.02 of the Standard Specifications State of California DEPARTMENT OF TRANSPORTATION Division of Engineering Services Office of Structure Construction <i>Li Yanhua</i> for RM <i>3/31/09</i> Structure Representative Date </div>				
备注: Remark:	#R787-QCP-900				



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-8742R1 DATE日期 2009.04.03 PAGE OF页码 1/1 Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: SEG006A OBG PLATE PANEL SPLICE		CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4	
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2009
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345T2-X 14/18/35 mm
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT

WELD I.D. 焊缝编号	DISCONTINUITY 不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
SSD45-PP10.5-107	1R1			ACC		100%MT

AFTER B-CWR452

BLANK

EXAMINED BY 主探 <i>[Signature]</i>	REVIEWED BY 审核 <i>[Signature]</i>
LEVEL - II SIGN 签名 / DATE日期 <i>[Signature]</i> 2009.04.03	LEVEL-II SIGN / DATE日期 <i>[Signature]</i> 2009.04.03
质量经理 / QCM <i>[Signature]</i> 2009.04.03	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-8741R1 DATE日期 2009.04.03 PAGE OF页码 1/1 Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: SEG006A OBG PLATE PANEL SPLICE		CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4	
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2009
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345T2-X 14/18/35 mm
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
SSD49-PP12-106	1R1			ACC.		100%MT
	2R1			ACC.		100%MT
SSD49-PP12-107	1R1			ACC.		100%MT
	2R1			ACC.		100%MT
SSD49-PP12-108	1R1			ACC.		100%MT
	2R1			ACC.		100%MT
SSD49-PP12-109	1R1			ACC.		100%MT
SSD49-PP12-110	1R1			ACC.		100%MT
	2R1			ACC.		100%MT
	3R1			ACC.		100%MT

AFTER B-CWR451

BLANK

EXAMINED BY 主探 <i>Lin Jianhua</i>	REVIEWED BY 审核 <i>Botinji</i>
LEVEL - II SIGN 签名 / DATE日期 <i>09.04.03</i>	LEVEL-II SIGN / DATE日期 <i>2009.04.03</i>
质量经理 / QCM <i>Lin Jianhua</i>	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-000231**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0212**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: 28-Mar-2009**Description of Non-Conformance:**

During random verification Magnetic Particle Testing (MT) of floor beam to bottom plate weld numbers SSD45-PP10.5-107, SSD49-PP12-106 and SSD49-PP12-107, Caltrans Quality Assurance (QA) Inspector discovered a total of eight (8) transverse linear indications ranging from 10 to 30mm in length. These linear indications were not found when Contractor performed 25% MT inspections.

Contractor's proposal to correct the problem:

ZPMC QC inspectors to receive training in regards to performing MT inspections in conformance with Section 6.26.2 of AWS D 1.5.

Corrective action taken:

ZPMC QC inspectors to received training in regards to performing MT inspections in conformance with Section 6.26.2 of AWS D 1.5. The welds in question were repaired and accepted.

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.

Inspected By: Lowry, Patrick

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer