

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-000608**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0581**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: 6AW Bottom Panel and Side Panel
Procedural	Procedural	Description:	

Reference Description: ZPMC performed Base Metal Repairs without the Engineer's approval in Segment 6AW

Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of removed temporary attachments.
- These BMR's were located on the east end of the segment on the Bottom Plate (BP140A) and Side Plate (SP752B), Cross Beam side.
- The Bottom Plate is identified as: BP140A
- The Side Plate is identified as: SP572B
- This complete joint penetration (CJP) weld # SEG027B-031 joins panels BP140A to SP752B.
- The approximate lengths of the BMR's range from 10mm to 150mm on BP140A and 30mm to 150mm on SP752B.
- A total of nine (9) repairs were in-process on BP140A and seven (7) repairs on SP752B.
- Theses repairs begin at the 6AW/6BW segment splice progressing west approximately 3100mm.
- The material is A709M Grade 345 SPCM.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

ZPMC Welding Quality Control Plan, Section 9.2.1.2: "Prior approval of the Engineer shall be obtained for repairs to base metal other than what was identified in Section 9.2.1.1 of this manual and the repair of all other cracks."

AWS D1.5/2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal."

Who discovered the problem: Dan Hernandez

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 0950 hours, 01-06-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1550 hours, 01-06-10, Verbal

QC Inspector's Name: Wu Zhi Cheng

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000571

Subject: NCR No. ZPMC-0581

Dated: 08-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000552 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has held internal training with the CWIs and production regaining base metal repairs without Engineer approval. NDT of base metal repaired areas will be provided when available.

ZPMC has held internal training with the CWIs and production regaining base metal repairs without Engineer approval. Attached is the meeting minutes of the ZPMC meeting that was held on 1/28/2010. NDT of base metal repaired areas will be provided when available, based on this ZPMC requests this proposal be accepted with action pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000552R00;

Caltrans' comments:

Status: AAP

Date: 08-Feb-2010

In order to accept approved action pending status it is understood that the word "regaining" above should read "regarding".

Submitted by: Howe, Bill

Date: 08-Feb-2010

Attachment(s):

会议签到单

会议时间： 2010-1-28 12: 40

会议地点： OBG 拼装会议室

会议主题： 关于返修过程中无报告及人员问题

与会人员（签到）：

CWI:

朱忠海 耿伟 李勤华 李强

施工队 总焊带班:

刘立军
樊汉强
冯石强
李强

会议签到单

会议时间：2010.01.28.

会议地点：OBG 会议室

会议主题：关于OBG拼装返修和修补过程中无报告及人员问题.

与会人员（签到）：

武高	王河	王科	钟国祥
李伟	郭伟	张强	李伟
陈军	王明	周亦	陈平
莫春辉	李杰		李平

会议记录

会议时间：2010.01.28 12: 40

会议地点：OBG 拼装会议室

会议主题：关于 OBG 拼装返修和修补过程中无报告及人员问题

会议内容纲要：

问题：

1. 返修过程中没有返修报告
2. 施工队焊接过程中没有 CWI 现场确认
3. 施工队焊接过程中没有 QC 人员在现场监控
4. 返修没有按照 WPS 上面要求预热和焊接
5. 焊工焊接位置不正确

对于上述问题我们的解决方案：

- 1、 返修过程中没有返修报告：如返修要进行焊接的都要开具返修报告，分一般返修和关键返修报告。一般返修报告先由探伤或 CWI 开具手写版，上面要写清楚是缺陷名称，缺陷的长度和大小，图号及焊缝编号都要写清楚，并签字。再由 CWI 人员签写所选用的 WPS，并签字。施工队工人拿到手写版的一般返修报告才能进行返修，在返修时必须有 CWI 或 QC 人员在现场才能进行工作，返修过程中所使用的 WPS 必须在现场，并且按照 WPS 上面所要求的预热及其他参数进行，现场 CWI 人员要对返修过程中预热、所选取的电流电压进行测量并记录数据，完全按照 WPS 上面的要求执行。同时按照手写的一般返修报告由文档人员开具正式的返修报告，生产工艺确认后由质检经理签字后下方施工队和质检。发现缺陷超出一般返修成为关键返修时，施工人员应停止次项工作，由探伤或 CWI 人员记录好缺陷位置、长度、大小、焊缝和钢板编号，开具关键返修报告提交文档室。文档人员拿到报

告后由生产部门写明缺陷产生的原因及以后的预防措施，再由工艺人员写清楚返修程序注意事项及所选用的 WPS，在由文档人员提交监理进行审批，审批结束后由文档人员下发到车间和现场质检。拿到关键返修报告后施工人员要在 CWI 和监控下进行返修，返修要严格按照返修报告上面及 WPS 上面的要求执行。施工队和质检要严格按照返修程序进行返修，禁止没有报告进行返修，对于没有报告返修者我们要对施工队及个人进行经济处罚。

2、 施工队焊接过程中没有 CWI 人员在现场：WQCP 上面要求 CWI 人员每半个小时在现场监控一次，以免在施工过程中能及时发现问题，并解决问题。但是我们近期出现长时间没有 CWI 人员在现场进行检查，这是我们 CWI 人员的失职。现在我们的 CWI 人员必须严格要求自己，按照质量控制计划上面的要求，至少每半个小时到一个焊接工位一次，并检查施工过程中是否存在违反要求的问题。施工队人员在施工之前必须通知质检人员，不允许存在没有 CWI 进行施工的存在，CWI 必须和施工人员协调和工作计划。施工人员在在通知 CWI 施工前必须做好准备工作，CWI 必须对施工前准备工作进行检查，施工过程中要进行检查，检查施工人员是否按照 WPS 上面及 WQCP 上面的要求执行，施工人员必须正确的接受 CWI 人员的检查，焊接结束后要对焊缝程序进行检查。要做到焊前、焊中及焊后 3 方面检查。

3、 施工队焊接过程中没有 QC 人员在现场监控：施工过程中 QC 人员必须在现场进行监控，QC 人员必须要对自己所监控的范围负责，不允许出现任何违反质量控制计划的事情出现。对于现场 QC 来说，应当随时监控现场的施工动态，对焊接过程中所使用的焊接参数进行记录、焊工进行核实编号、是否使用正确的 WPS、所处的环境是否适合焊接、焊机是否是经过鉴定过的、焊材是否是处于保温状态等很多方面进行监控的，所以说 QC 这个位置是非常重要的。对于发现问题能及时按照要求进行解决的要及时解决，对于不能解决的可以及时反馈 CWI 人员进行解决，施工人员必须配合 QC 的工作。加入没有 QC 在现场监控，施工过程中的问题就不

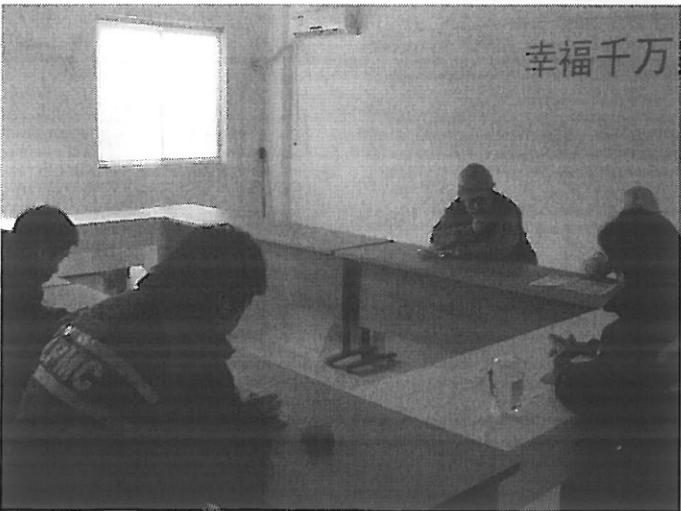
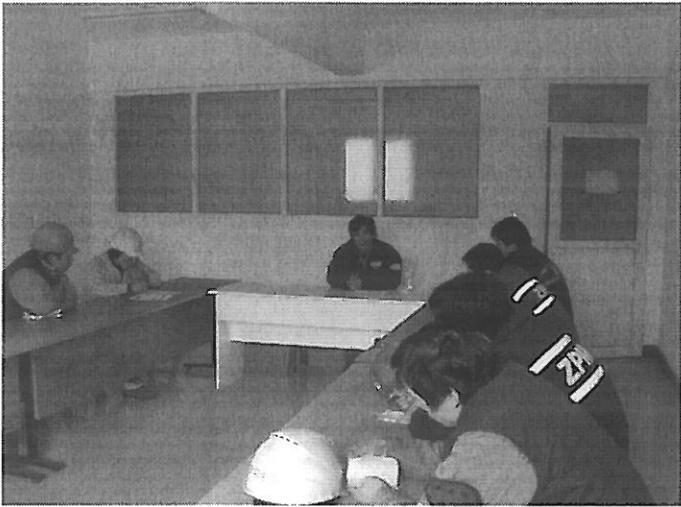
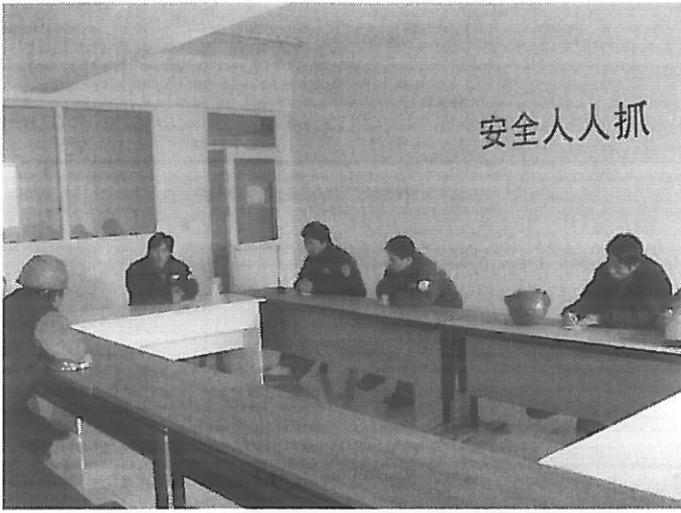
能及时解决和及时反馈，施工人员就会视问题而不见。施工人员有责任通知 QC 人员发现问题，对于开始焊接之前必须通知 QC 进行监控，QC 也要主动配合施工，QC 要时刻在现场监控，对于如特殊原因要求离开的需让别人代替，坚决不允许出现没有 QC 人员在现场监控。

4、返修没有按照 WPS 上面要求预热和焊接：WPS 上面的参数都是经过试验得出来的结论，所以要严格按照 WPS 上面的要求执行。就如预热：预热可以使焊接位置周围的水分消失，减少了影响焊接过程中的氢，氢在焊缝中容易造成裂纹的出现，为什么我们在焊接重要位置的时候经常采用低氢焊条，就是减少焊缝中的氢含量，减少裂纹和的出现，所以说焊前预热是很重要的，WPS 里面的参数是能够焊出合格焊缝的依据，没有 WPS 或没有按照 WPS 焊接的焊缝就是不合格的焊缝。WPS 必须贴到施工现场，以便及时查阅，以后对于没有按照 WPS 焊接的焊缝我们要求刨除焊缝，并对焊工进行处罚，严重的取消在美国钢桥上面工作的资格，没收焊工证。

5、焊工焊接位置不正确：焊工证都是经过权威机构认可的证明。对于焊接位置不正确的问题也视为没有焊工证，在施工前现场检验员要检查焊工的焊工证，检查焊工的发证机构、焊接的位置及焊工的编号，焊工只能焊接焊工证上面要求的位置，没有要求的位置焊工不能焊接，检验员要严格控制。焊工必须主动配合质检的检查，不允许能虚作假，如发现焊接与焊工证位置不同的焊工要进行经济处罚，严重的取消焊接资格。

OBG 拼装质检室

2010-1-28



NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000571

Subject: NCR No. ZPMC-0581

Dated: 23-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000552 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the WRR that was used at the time of the repair and the NDT documentation to show that those welds are now acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC acknowledges that a CWR should have been prepared in this case and has issued an NCR to documents this non conformance. In addition, ZPMC QA has discussed this with the QC/CWI on site to ensure that they understand that a CWR or WRR must be present during repair. ZPMC is providing the WRR that was used at the time of the repair and the NDT documentation to show that those welds are now acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000552R01;

Caltrans' comments:

Status: CLO

Date: 05-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0581 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 05-Apr-2010



No. B-706

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-21

REGARDING: NCR-000608 (ZPMC-0581) NCR-000610(ZPMC-0583)

ZPMC acknowledged this problem and has issued internal NCRs. ZPMC is providing the WRR & NDT records what show ZPMC's repair procedure and the soundness of the base metal after repair. ZPMC QA has instructed the QC/CWI that a copy of WRR/CWR should be prepared on site during repair. These issues have been confirmed and removed from punchlist by CT's representative. Based on this, ZPMC is requesting these NCRs to be closed.

ATTACHMENT:

NCR-000608(ZPMC-0581)

NCR-000610(ZPMC-0583)

B-WR9815

B787-MT-19443

B787-MT-19947

B787-MT-19948

A handwritten signature in black ink, appearing to be "Lijun", is written above the date.

3/21/10



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: 07-Jan-2010

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: 05.03.06-000571

Subject: NCR No. ZPMC-0581

Reference Description: ZPMC performed Base Metal Repairs without the Engineer's approval in Segment 6AW

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: 06

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

-Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of removed temporary attachments.

-These BMR's were located on the east end of the segment on the Bottom Plate (BP140A) and Side Plate (SP752B), Cross Beam side.

-The Bottom Plate is identified as: BP140A

-The Side Plate is identified as: SP572B

-This complete joint penetration (CJP) weld # SEG027B-031 joins panels BP140A to SP752B.

-The approximate lengths of the BMR's range from 10mm to 150mm on BP140A and 30mm to 150mm on SP752B.

-A total of nine (9) repairs were in-process on BP140A and seven (7) repairs on SP752B.

-Theses repairs begin at the 6AW/6BW segment splice progressing west approximately 3100mm.

-The material is A709M Grade 345 SPCM.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0581

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
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 (707) 649-5453
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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-000608

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 06-Jan-2010

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

NCR #: ZPMC-0581

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: 6AW Bottom Panel and Side Panel
 Procedural Procedural Description:

Reference Description: ZPMC performed Base Metal Repairs without the Engineer's approval in Segment 6AW

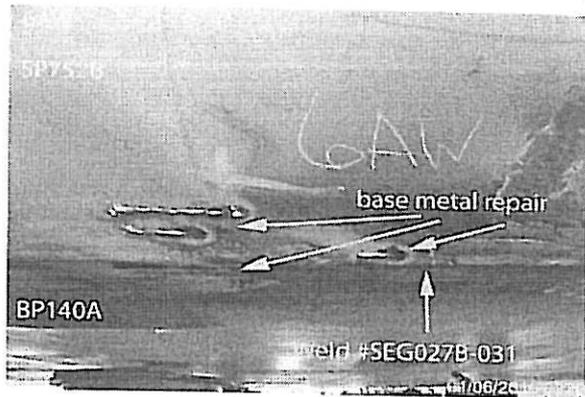
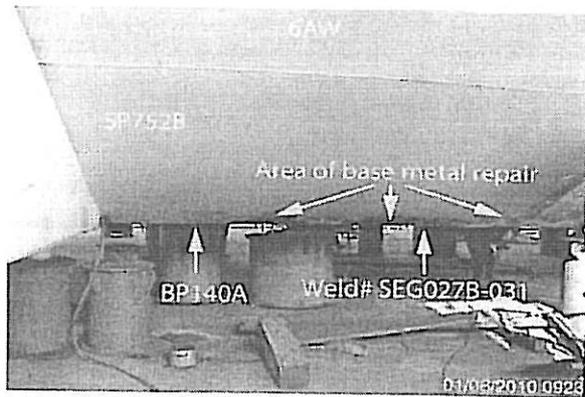
Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

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- These BMR's were located on the east end of the segment on the Bottom Plate (BP140A) and Side Plate (SP752B), Cross Beam side.
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

ZPMC Welding Quality Control Plan, Section 9.2.1.2: "Prior approval of the Engineer shall be obtained for repairs to base metal other than what was identified in Section 9.2.1.1 of this manual and the repair of all other cracks."

AWS D1.5/2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal."

Who discovered the problem: Dan Hernandez

Name of individual from Contractor notified: Kevin Chen

Time and method of notification: 0950 hours, 01-06-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1550 hours, 01-06-10, Verbal

QC Inspector's Name: Wu Zhi Cheng

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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: Carreon, Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh, Mazen

SMR

JR MT

W7



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-446(ZPMC-0581)
Item: Base Metal Repair 名称描述: 母材返修	Item Number: 件号:	Drawing: 图号: 6AW
Location: OBG Trial Assembly Yard 位置: 外场		Date: 日期: 2010-02-10

20X18

Description of Nonconformance:

During CT's inspection, following issues were found:

- Base metal repairs were being performed without prior approval of engineer at locations of removed temporary attachments on the east end of bottom Plate BP140A and SP752B, CB side. The splices weld is SEG027B-031.
- A total of 9 repairs were in-process on BP140A and 7 repairs on SP752B.
- The material is SPCM.

加州在检查中发现如下问题:

- 针对临时构件移除的位置, 正在进行母材返修, 于 BP140A 和 SP752B (SEG027B-031)
- BP140A 共有 9 处返修, SP752B 共有 7 处返修。
- 母材为 SPCM。

Work By: 施工方: <i>Mia Galin</i>	Prepared by: 准备: <i>[Signature]</i>	Reviewed by QCE: 质量工程师批准: <i>[Signature]</i>
<input type="checkbox"/> Drawing Error 图纸错误	<input type="checkbox"/> Material Defect 材料缺陷	<input checked="" type="checkbox"/> Fabrication Error 制作错误
<input type="checkbox"/> Other 其他原因		

Disposition: 处理措施:	<input type="checkbox"/> Use as is 回用	<input type="checkbox"/> Repair 返修	<input type="checkbox"/> Reject 拒收
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Recommendation:

建议:

Prepared by: _____ 准备	Approved by QCA: _____ 质量经理批准
--------------------------	----------------------------------

Reason for Nonconformance:

不符合原因:

操作不当
Unadequately operation.

Prevention of Re-occurrence:

预防措施:

增加QC. QA 加{ 监督控制. Enhance supervision by qc and QA on-site.

Approved by/批准: MARQ

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

焊缝返修时按照 WR 98 进行处理, 对水压试验 100% MT 和 100% VT 检查

钱查查. 2.21/2010

Reviewed /批准: _____

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Gu Yong Jian

07120671

2010.3.21

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: 07-Jan-2010

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: 05.03.06-000573

Subject: NCR No. ZPMC-0583

Reference Description: ZPMC performed Base Metal Repairs without the prior approval of the Engineer in Segment 6BE/6CE

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: 06

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

ISSUE FOR THE BOTTOM PLATES:

- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of removed temporary attachments.
- These BMR's were located along the 6BE/6CE Bottom Plate Complete Joint Penetration (CJP) Splice.
- The Bottom Plates on 6BE are identified as: BP168A, BP60A, BP114A
- The Bottom Plates on 6CE are identified as: BP169A, BP61A, BP115A
- The CJP splice weld # is designated OBE6C-004.
- The approximate lengths of the BMR's range from 10mm to 150mm.
- A total of seventeen (17) repairs were in-process on 6BE and twenty-two (22) repairs on 6CE throughout the length of the Bottom Plate splice.
- The material is A709M Grade 345 Non-SPCM.

ISSUE FOR THE EDGE PLATES:

- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of temporary attachments.
- These BMR's were located along the 6BE+6CE Edge Plate Complete Joint Penetration (CJP) Splice.
- The Edge Plate on 6BE is identified as: EP41A
- The Edge Plate on 6CE is identified as: EP36A.
- The CJP splice weld # is designated OBE6A-005.
- The Approximate lengths of the BMR's range from 15mm to 125mm.
- A total of eleven (11) repairs were in-process on 6BE and four (4) repairs on 6CE throughout the length of the Edge Plate splice.
- Both EP panels EP36A and EP41A are A709 Grade 345 Seismic Performance Critical Members (SPCM) material.

NCT

(Continued Page 2 of 2)

Action Required and/or Action Taken:

Propose a resolution for both the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0583

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 #: 04-0120F4
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-000610

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Jan-2010

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

NCR #: ZPMC-0583

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: 6BE/6CE Bottom Plates and Edge Plates
 Procedural Procedural Description:

Reference Description: ZPMC performed Base Metal Repairs without the prior approval of the Engineer in Segment 6BE/6CE

Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

ISSUE FOR THE BOTTOM PLATES:

- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of removed temporary attachments.
- These BMR's were located along the 6BE/6CE Bottom Plate Complete Joint Penetration (CJP) Splice.
- The Bottom Plates on 6BE are identified as: BP168A, BP60A, BP114A
- The Bottom Plates on 6CE are identified as: BP169A, BP61A, BP115A
- The CJP splice weld # is designated OBE6C-004.
- The approximate lengths of the BMR's range from 10mm to 150mm.
- A total of seventeen (17) repairs were in-process on 6BE and twenty-two (22) repairs on 6CE throughout the length of the Bottom Plate splice.
- The material is A709M Grade 345 Non-SPCM.

ISSUE FOR THE EDGE PLATES:

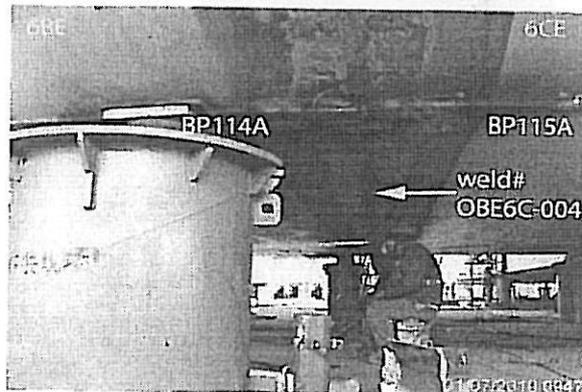
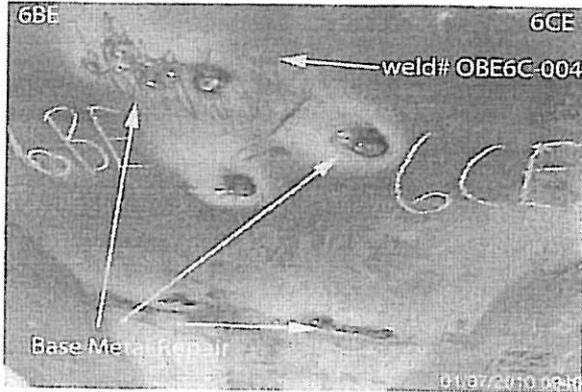
- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of temporary attachments.
- These BMR's were located along the 6BE+6CE Edge Plate Complete Joint Penetration (CJP) Splice.
- The Edge Plate on 6BE is identified as: EP41A
- The Edge Plate on 6CE is identified as: EP36A.
- The CJP splice weld # is designated OBE6A-005.
- The Approximate lengths of the BMR's range from 15mm to 125mm.
- A total of eleven (11) repairs were in-process on 6BE and four (4) repairs on 6CE throughout the length of the

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)

Edge Plate splice.

-Both EP panels EP36A and EP41A are A709 Grade 345 Seismic Performance Critical Members (SPCM) material.



Applicable reference:

Special Provisions Section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

ZPMC Welding Quality Control Plan, Section 9.2.1.2: "Prior approval of the Engineer shall be obtained for repairs to base metal other than what was identified in Section 9.2.1.1 of this manual and the repair of all other cracks."

AWS D1.5/2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal."

Who discovered the problem: Joe Alaniz and Dan Hernandez

Name of individual from Contractor notified: CK Chan

Time and method of notification: 1045 hours, 01-07-10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1400 hours, 01-07-10, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

QC Inspector's Name: Wu Zhi Chen

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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: Carreon,Albert

Lead Reviewer/Task Leader

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-445(ZPMC-0583)
Item: Base Metal Repair 名称描述: 母材返修	Item Number: 件号:	Drawing: 图号: 6BE/6CE
Location: OBG Trial Assembly Yard 位置: 外场		Date: 日期: 2010-02-10

Description of Nonconformance:

During CT's inspection, following issues were found:

ISSUE FOR BOTTOM PLATES

- Base metal repairs were being performed without prior approval of engineer at locations of removed temporary attachments along the 6BE/6CE bottom plate CJP splice (OBE6C-004).
- The Bottom Plates on 6BE are identified as: BP168A, BP60A, BP114A(NON-SPCM)
- The Bottom Plates on 6CE are identified as: BP169A, BP61A, BP115A(NON-SPCM)
- A total of 17 repairs were in-process on 6BE and 22 repairs on 6CE.

ISSUE FOR EDGE PLATES

- Base metal repairs were being performed without prior approval of engineer at locations of removed temporary attachments along the 6BE/6CE edge plate CJP splice (OBE6A-005).
- The edge plate on 6BE is identified as: EP41A (SPCM)
- The edge plate on 6CE is identified as: EP36A (SPCM)
- A total of 11 repairs were in-process on 6BE and 4 repair on 6CE.

加州在检查中发现如下问题:

底板:

- 针对临时构件移除的位置, 正在进行母材返修, 沿 6BE/6CE 底板拼缝 (OBE6C-004)
- 6BE 段上的底板为: ^{PL168A PL704B PL764A} BP168A, BP60A, BP114A
- 6CE 段上的底板为: ^{PL413A PL906C PL769A} BP169A, BP61A, BP115A SPCM
- 6BE 共有 17 处返修, 6CE 共有 22 处返修。

腹板:

- 针对临时构件移除的位置, 正在进行母材返修, 沿 6BE/6CE 腹板拼缝 (OBE6A-005)
- 6BE 段上的腹板为: EP41A (SPCM)
- 6CE 段上的腹板为: EP36A (SPCM) *PL X110C . PL1149A*
- 6BE 共有 11 处返修, 6CE 共有 4 处返修。

Work By: <i>[Signature]</i>	Prepared by: <i>[Signature]</i>	Reviewed by QCE: <i>[Signature]</i>
施工方:	准备:	质量工程师批准:
<input type="checkbox"/> Drawing Error	<input type="checkbox"/> Material Defect	<input checked="" type="checkbox"/> Fabrication Error
图纸错误	材料缺陷	制作错误
		<input type="checkbox"/> Other
		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:

Prepared by: _____	Approved by QCA: _____
准备	质量经理批准

Reason for Nonconformance:

不符合原因:

非正常操作.

Unadequately operation.

Prevention of Re-occurrence:

预防措施:

现场的QC, QA加强监督

Enhance supervision by qc and QA on site.

Approved by/批准:

MARIQ

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

焊接区域时,按照 B-WR9815 进行处理. 对焊缝的 100%MT 和 100%VT 检查.

王金星. 2.24/2010

Reviewed /批准:

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Jin Yong Jiam

0120671

2010. 3. 21

Verified by QCI/质检确认:

Reviewed by QCA/质检主任审核:

#R787-QCP-1300



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 SEOBR	部件图号 Drawing No	OB6W(E)/OB7W(E)	报告编号 Report No.	B-WR9815
合同号 Contract No.:	04-0120F4	部件名称 Items Name	底板、非联系梁侧斜底板及腹板、顶板Side plate and side plate, edge plate, deck plate	NDT报告编号 Report No. of NDT	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

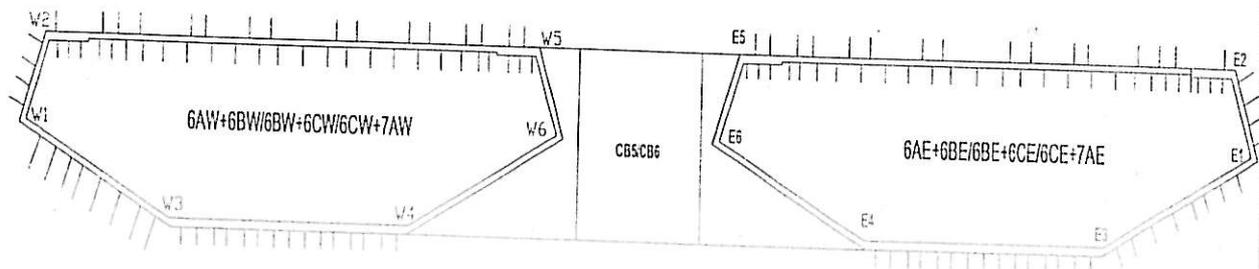
经检查发现西线6AW+6BW/6BW+6CW/6CW+7AW及东线6AE+6BE/6BE+6CE/6CE+7AE吊装段底板、非联系梁侧斜底板及腹板,顶板马板去除后母材需修补。具体位置见下图所示:

After inspection west linear 6AW+6BW/6BW+6CW/6CW+7AW and east linear 6AE+6BE/6BE+6CE/6CE+7AE lifting bottom plate and side plate, edge plate without face strut plate, deck plate, the base metal was gouged after removing temporary attachment, the detail sees the following draft.

检验员 (Inspector): *Wang Zhu* wang zhu 日期 (Date): 2010.01.15

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

工人操作失误, 导致母材损伤。

Worker operator error caused base metal gouged.

车间负责人(Foreman): Gao Jun 日期(Date): 1.20

处理意见

Disposition :

1. QC和CWI在整个修补过程中都应在场并指导以确保返修按照处理意见以及AWS D1.5要求进行;
 2. 按照焊接返修工艺规程(WPS)打磨缺陷区域至光滑;
 3. 准备一个正确的接头形式, 具体参见返修的WPS;
 4. 在NDT检测前口头通知QA。对返修区域作100%MT和100%VT检查;
 5. 如果仍发现有缺陷, 通过打磨的方法去除所有缺陷以确认缺陷完全被消除, 并重复第四步以确认缺陷完全被消除;
 6. 将杂物以及MT检测遗留的残留物清理干净;
 7. 根据批准的焊接返修工艺规程(WPS)进行预热及焊接;
 8. 将焊接区域打磨至与母材平齐;
 9. 在NDT检测前口头通知QA。对返修区域作100%MT和100%VT检查。
-
1. QC and CWI should be present to witness the repair, direct and supervise all repair operations during this repair to ensure the repair is per the disposition requirements, and the AWS D1.5 code requirements.
 2. Grind the repair area to a smooth finish according to the approved repair WPS.
 3. Prepare the joint according to the approved WPS.
 4. Notify QA verbally prior to NDT. Perform 100%MT and 100%VT of the repair area.
 5. Remove all defects by grinding to ensure all defects are completely removed if defects still exist, and repeat "step 4" to assure complete removal of all defects if necessary.
 6. Clean the repair area of all loose debris including MT powder.
 7. Preheat and weld according to the approved WPS.
 8. Grind the weld flush after welding.
 9. Notify QA verbally prior NDT. Perform 100%MT and 100%VT of the repair area.

工艺: Xu Dongkan
Technical engineer

审核:
Approved by

日期
Date

10.1.20



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

B-WR9815

NA

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	OB6W(E)/OB7W	报告编号 Report No.	
合同号 Contract No.:	04-0120F4	部件名称 Items Name	底板、非联系梁侧斜 底板及腹板、顶板 side plate and side plate, edge plate, deck plate	NDT报告编号 Report No. of NDT	
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

培训和教育操作工, 提高操作水平。

Train and educate operator to improve operation skill.

车间负责人(Foreman): Gao Jun 日期(Date): 1.20

参照的WPS编号
Repair WPS No.

WPS-345-SMAW-1
G(1F)-Repair
WPS-345-SMAW-2
G(2F)-Repair
WPS-345-SMAW-3
G(3F)-Repair
WPS-345-SMAW-4
G(4F)-Repair
WPS-345-SMAW-1
G(1F)-FCM-Repair
WPS-345-SMAW-2
G(2F)-FCM-Repair
WPS-345-SMAW-3
G(3F)-FCM-Repair
WPS-345-SMAW-4
G(4F)-FCM-Repair

工艺员
technologist

Xu Dongkai

1.20

返修(碳刨)前预热温度
Preheat temperature
before gouging

NA

返修的缺陷
Description
of discontinuity

母材裂纹

焊前处理检查
Inspection
before welding

acc

焊前预热温度
Preheat temperature
before welding

180°C, 186°C

最大碳刨深度
Max. depth of gouging

5mm

碳刨总长
Total length of gouging

195°C, 179°C

焊工
welder

048639

焊接类型

welding type SMAW

焊接位置
position

1G, 3G, 4G

焊接电流
Current

1G: 170

焊接电压

Voltage 1G: 24V

焊接速度
Speed

1G: 125

返修后检查
Inspection After repairing:

3G: 155

4G: 23

3G: 116

外观检查
VT result

acc

检验员

Inspector Guorong jian

日期
Date

2010.03.03

NDT复检
NDT result

MT acc

探伤员

NDT person Li Hanhua

日期
Date

2010.03.14

见证:

Witness/Review:

备注:

Remark:



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-19947 DATE日期 2010.03.09 PAGE OF页码 1/1 Revision No: 0

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

DRAWING NO. BP168A/BP60A/BP114A/EP41A CALTRANS CONTRACT NO.: 04-0120F4
 图号: temporary attachment/web plate 加州工程编号

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 , 2010
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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
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MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
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PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
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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/F2-X 20/28mm
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WELDING PROCESS 焊接方法	NA	TYPE OF JOINT 焊缝类型	NA
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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			
PL812A				ACC.		base metal
PL704B				ACC.		base metal
PL758A				ACC.		base metal
PL1149A				ACC.		base metal

BLANK

EXAMINED BY主探
 Ding Acheng *Ding A Cheng* 2010.03.09
 LEVEL - II SIGN 签名 DATE日期

REVIEWED BY 审核
 SV Wer 2010.03.09
 LEVEL-II SIGN / DATE日期

质量经理 / QCM

 签字 SIGN / 日期 DATE

用户CUSTOMER

 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-000604**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0581**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: 06-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of the OBG segments in the Trial Assembly area, this QA inspector discovered the following issues:

- Base metal repairs (BMR) were being performed without prior approval of the Engineer at locations of removed temporary attachments.
- These BMR's were located on the east end of the segment on the Bottom Plate (BP140A) and Side Plate (SP752B), Cross Beam side.
- The Bottom Plate is identified as: BP140A
- The Side Plate is identified as: SP752B
- This complete joint penetration (CJP) weld # SEG027B-031 joins panels BP140A to SP752B.
- The approximate lengths of the BMR's range from 10mm to 150mm on BP140A and 30mm to 150mm on SP752B.
- A total of nine (9) repairs were in-process on BP140A and seven (7) repairs on SP752B.
- These repairs begin at the 6AW/6BW segment splice progressing west approximately 3100mm.
- The material is A709M Grade 345 SPCM.

Contractor's proposal to correct the problem:

Perform NDT required to verify repair quality.

Corrective action taken:

Contractor submitted WRR used during repair work along with subsequent NDT documentation verifying the repairs in question are in conformance with Contract specifications. An internal NCR was also issued by the Contractor in regards to this matter.

Did corrective action require Engineer's approval? Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?**

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Yes No

Comments:

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 152.1675.3703, who represents the Office of Structural Materials for your project.

Inspected By:	Simonis,Jim	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer
