

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-000596

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 04-Jan-2010

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

NCR #: ZPMC-0569

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Cross beam 14 Floorbeam
Procedural	Procedural	Description:	

Reference Description: The welding of this floorbeam intermediate diaphragm joint has deviated from the approved joint detail in both the WPS and approved Welding Details

Description of Non-Conformance:

During the Quality Assurance (QA) random in-process visual inspection of Orthotropic Box Girder (OBG) Crossbeam CB14, this QA inspector discovered the following issue:

- The fabrication has deviated from the weld joint design specified on the approved drawings.
- The specified weld detail, WD60M, does not indicate the use of steel backing.
- Steel backing bar was added without approval of the Engineer.
- The measured root openings for these joints are between 7mm and 15mm.
- The WPS used for welding specified a maximum root gap of 6mm + 2mm.
- The weld joints affected are identified as: FB205-042-029, FB205-042-030, FB205-041-029, FB205-043-029, FB205-043-030, FB205-044-029, FB205-044-030, FB204-042-054, FB204-042-088, FB204-042-058, FB204-042-049, FB204-043-087, FB204-043-054, FB204-043-088, FB204-044-054, FB204-044-088, FB204-044-053, and FB204-044-087.
- The material is A709 Grade 345 Non Seismic Performance Critical Member (Non SPCM).
- OBG Cross beam CB14 is located in the Bay 3.-OBG Cross beam CB14 is located in the Bay 3.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

AWS D1.5/2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal (other than those required by 3.2), repair of major or delayed cracks, repairs to ESW and EGW welds with internal defects, or for a revised design to compensate for deficiencies".

Approved Show Drawings WD60M: CJP with no steel backing

Approved WPS: WPS-B-T-2233-B-U2a-F

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Chen Ji Wei

Time and method of notification: 1500 hours, 01-04-09, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1800 hours, 01-04-09, Email

QC Inspector's Name: Zhan Wei

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



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 **Date:** 06-Jan-2010
 375 BURMA ROAD
 OAKLAND CA 95607 **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:** 05.03.06-000560
Subject: NCR No. ZPMC-0569

Reference Description: The welding of this floorbeam intermediate diaphragm joint has deviated from the approved joint detail in both the WPS and approval

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:** 09

Remarks:

During the Quality Assurance (QA) random in-process visual inspection of Orthotropic Box Girder (OBG) Crossbeam CB14, this QA inspector discovered the following issue:

- The fabrication has deviated from the weld joint design specified on the approved drawings.
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- The WPS used for welding specified a maximum root gap of 6mm + 2mm.
- The weld joints affected are identified as: FB205-042-029, FB205-042-030, FB205-041-029, FB205-043-029, FB205-043-030, FB205-044-029, FB205-044-030, FB204-042-054, FB204-042-088, FB204-042-058, FB204-042-049, FB204-043-087, FB204-043-054, FB204-043-088, FB204-044-054, FB204-044-088, FB204-044-053, and FB204-044-087.
- The material is A709 Grade 345 Non Seismic Performance Critical Member (Non SPCM).
- OBG Cross beam CB14 is located in the Bay 3.-OBG Cross beam CB14 is located in the Bay 3.

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-0569

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000560

Subject: NCR No. ZPMC-0569

Dated: 01-Jun-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000676 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: The bars were used to correct the root gap, ZPMC is providing the WRR they were using at the time to correct the oversized root gap.

Due to a misunderstanding on the shop floor, the Department's representative thought that the backing bars used were to remain permanently. The bars were used to correct the root gap, ZPMC is providing the WRR they were using at the time to correct the oversized root gap. ZPMC requests that this NCR be closed due to the misunderstanding.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000676R00;

Caltrans' comments:

Status: CLO

Date: 03-Jun-2010

This proposed resolution is acceptable. The Department concurs that Non-Conformance ZPMC-0569 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 03-Jun-2010



No. B-775

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-5-31

REGARDING: NCR-000596(ZPMC-0569)

The backing bars were used the correct the exceeding gap between webs. CT inspector misunderstood that ZPMC was plan finished the CJP with the backings. ZPMC is providing the WRR what was used and is requesting closure of this NCR.

ATTACHMENT:

NCR-000596(ZPMC-0569)

B-WR8570

A handwritten signature in black ink, appearing to be "Jm" followed by a flourish.

5/31/10



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: 06-Jan-2010

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager
 Subject: NCR No. ZPMC-0569

Job Name: SAS Superstructure
 Document No: 05.03.06-000560

Reference Description: The welding of this floorbeam intermediate diaphragm joint has deviated from the approved joint detail in both the WPS and apprc

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: 09

Remarks:

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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-0569

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

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 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000596

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 04-Jan-2010

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

NCR #: ZPMC-0569

Type of problem:

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

Bridge No: 34-0006

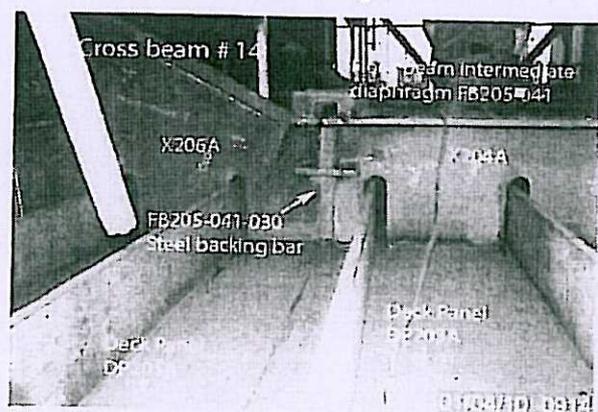
Component: Cross beam 14 Floorbeam

Reference Description: The welding of this floorbeam intermediate diaphragm joint has deviated from the approved joint detail in both the WPS and approved Welding Details

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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AWS D1.5/2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal (other than those required by 3.2), repair of major or delayed cracks, repairs to ESW and EGW welds with internal defects, or for a revised design to compensate for deficiencies".

Approved Show Drawings WD60M: CJP with no steel backing

Approved WPS: WPS-B-T-2233-B-U2a-F

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Chen Ji Wei

Time and method of notification: 1500 hours, 01-04-09, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1800 hours, 01-04-09, Email

QC Inspector's Name: Zhan Wei

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



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	CB202G	报告编号 Report No.	B-WR8570
合同号 Contract No.:	04-0120F4	部件名称 Items Name	横梁 Beam	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

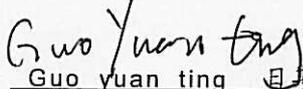
焊缝缺陷描述如下：

Description of welding discontinuity:

CB14隔板装配，对接缝间隙过大。相关情况如下：

Butt weld gap exceeded requirement during assembly CB14, the relevant size:

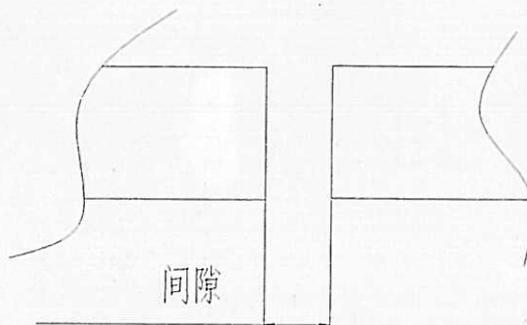
Relevant weld 涉及焊缝	Gap 间隙mm	Relevant weld 涉及焊缝	Gap 间隙mm	Relevant weld 涉及焊缝	Gap 间隙mm
FB204-042-054	12	FB204-043-087	9	FB204-044-054	10
FB204-042-088	6	FB204-043-054	11.5	FB204-044-088	8
FB204-042-058	11	FB204-043-088	10.5	FB204-044-053	10
FB204-042-049	8			FB204-044-087	11
FB205-042-029	9	FB205-043-029	11	FB205-044-029	15
FB205-042-030	7	FB205-043-030	13	FB205-044-030	15
FB205-041-029	9				


 检验员 (Inspector): Guo yuan ting 日期(Date): 09.11.15

焊缝返修位置示意图：

Draft of welding discontinuity:

Gap



产生原因:

Caused:

焊接变形和制作误差。

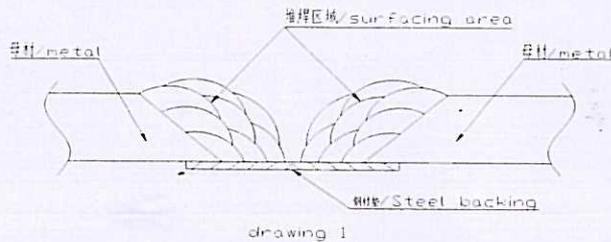
Weld distortion and fabricate error.

车间负责人(Foreman): Zhang Giming 日期(Date): 09.11.17

处理意见

Disposition :

1. 将要修补的区域打磨光滑;
2. 准备一个正确的接头形式, 具体参见返修的WPS;
3. 做100%VT和100%MT, 并按照图一所示加钢衬垫;
4. 根据返修的焊接返修工艺规程(WPS)进行预热及焊接;
5. 焊后去除钢衬垫, 将焊缝打磨至与母材平齐;
6. 根据图纸要求进行相应的NDT(VT、MT和UT)检测;



1. Grind the edge of the repair area cleanly
2. Prepare an right joint according to the approved WPS;
3. Perform 100%VT and 100%MT, and add steel backing according to the attached drawing 1;
4. Preheat and weld according to the relevant WPS;
5. Gouge off the steel backing and grind the weld flush with base metal after welding;
6. Perform NDT inspection(VT, MT and UT) of the weld according to the working drawings.

工艺:
Technical engineer

He Xiaolin

09.11.17

审核:
Approved by

日期
Date



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.	CB202G	报告编号 Report No.	B-WR8570
合同号 Contract No.:	04-0120F4	部件名称 Items Name	横梁 Beam	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

加强制作过程中的监控，减少误差。

Enhance supervision in process of fabrication to reduce error.

车间负责人(Foreman): *Zhang Guiming* 日期(Date): *09.11.17*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1G(1F)-Repair WPS-345-FCAW-1G(1F)-Repair-1 WPS-345-SMAW-2G(2F)-Repair WPS-345-FCAW-2G(2F)-Repair-1 WPS-345-SMAW-3G(3F)-Repair WPS-345-SMAW-4G(4F)-Repair	工艺员 technologist	<i>Haoxinlin</i> <i>09.11.17</i>
返修(碳刨)前预热温度 Preheat temperature before gouging		返修的缺陷 Description of discontinuity	
焊前处理检查 Inspection before welding		焊前预热温度 Preheat temperature before welding	
最大碳刨深度 Max. depth of gouging		碳刨总长 Total length of gouging	
焊工 welder	焊接类型 welding type	焊接位置 position	
焊接电流 Current	焊接电压 Voltage	焊接速度 Speed	

返修后检查
Inspection After repairing:

外观检查 VT result	检验员 Inspector	日期 Date
NDT复检 NDT result	探伤员 NDT person	日期 Date

见证:
Witness/Review:

备注:
Remark:

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-000631**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0569**Type of problem:**

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

Date the Non-Conformance Report was written: 04-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process visual inspection of Orthotropic Box Girder (OBG) Crossbeam CB14, this QA inspector discovered the following issue:

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- The material is A709 Grade 345 Non Seismic Performance Critical Member (Non SPCM).
- OBG Cross beam CB14 is located in the Bay 3.-OBG Cross beam CB14 is located in the Bay 3.

Contractor's proposal to correct the problem:

Backing bars were utilized during buttering to accommodate oversized root gap. Amount of base material added was within the limits of buttering to achieve proper joint fit up allowed by Section 3.3.4.1 of AWS D1.5 with out Engineer's approval.

Corrective action taken:

N/A

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

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