

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-000500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 01-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0473**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** Lift 12 OBG Floor Beams**Procedural****Procedural****Description:****Reference Description:** Out of Flatness Floorbeam components for Lift 12 due to Improper Handling and Storage**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector observed lift 12 Floor Beam components located in Bay 2 that were out of flatness and have been bent due to improper handling and storage. These Floor Beam components were identified as FB3007-002, FB3069-004 and FB3069-002.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Caltrans Standard Specifications 1999

Section 6-1.3: Articles or materials to be incorporated in the work shall be stored in such a manner as to ensure the preservation of their quality and fitness for the work, and to facilitate inspection.

Section 55-1.04: In handling and shipping of the steel work, every care shall be taken to avoid bending, scraping or overstressing the pieces. All pieces bent or otherwise injured will be rejected.

Section 55-3.09: Finish members shall be true to line and free from twists, bends and open joints.

Section 55-3.01: Workmanship and finish shall be equal to the best general practice in modern bridge shops.

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Wang Wen Bin

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1200 hours, Verbal

QC Inspector's Name: Chen Xi

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
375 BURMA ROAD
OAKLAND CA 95607

Date: 11-Dec-2009

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Document No: 05.03.06-000463

Subject: NCR No. ZPMC-0473

Reference Description: Out of Flatness Floorbeam components for Lift 12 due to Improper Handling and Storage

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:** 12

Remarks:

The Caltrans Quality Assurance (QA) Inspector observed lift 12 Floor Beam components located in Bay 2 that were out of flatness and have been bent due to improper handling and storage. These Floor Beam components were identified as FB3007-002, FB3069-004 and FB3069-002.

Action Required and/or Action Taken:

Submit a repair plan to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0473

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: 05.03.06-000463

Subject: NCR No. ZPMC-0473

Dated: 25-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000541 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will provide explanation of measures that they took to correct the issue. In addition, NDT documentation will be provided to show the repairs were successful and the floorbeam is not damaged.

ZPMC will provide explanation of measures that they took to correct the issue documented in the NCR. In addition, NDT documentation will be provided to show the repairs were successful and the floorbeam is not damaged. Based on this ZPMC requests that this course of action be approved with action pending. When documents become available ZPMC will request closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000541R00

Caltrans' comments:

Status: AAP

Date: 26-Jan-2010

The proposed resolution provided by the contractor is accepted. The NCR will be closed once the required preventative measures are taken and repair documentation are submitted for the Engineer's review and acceptance.

Submitted by: Chao, Ching

Attachment(s):

Date: 26-Jan-2010

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000463

Subject: NCR No. ZPMC-0473

Dated: 06-May-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000541 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the bent flanges using heat straightening and performed NDT to show that the material is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the bent flanges using heat straightening and performed NDT to show that the material is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000541R01;

Caltrans' comments:

Status: CLO

Date: 10-May-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0473 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 10-May-2010



No. B-747

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-5-6

REGARDING: NCR-000500(ZPMC-0473)

ZPMC acknowledged this issue and has released an internal NCR. Heat Straightening was performed to rectify the distortion caused by the unsatisfied storage. These panels have now been assembled into segment as showed in the following pictures. ZPMC is providing the HSR1 report and the NDT record shows the soundness of metal after heat straightening and is requesting closure of this NCR.

ATTACHMENT:

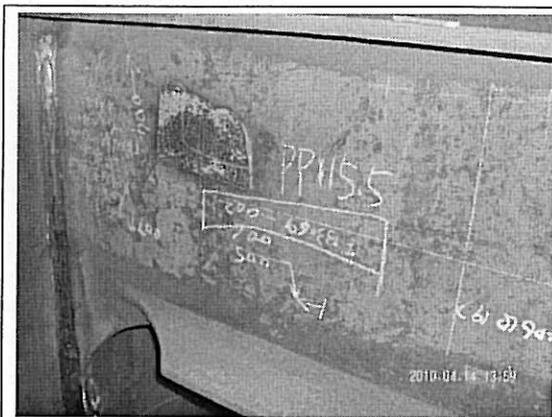
NCR-000500(ZPMC-0473)

HSR1(B)-7449

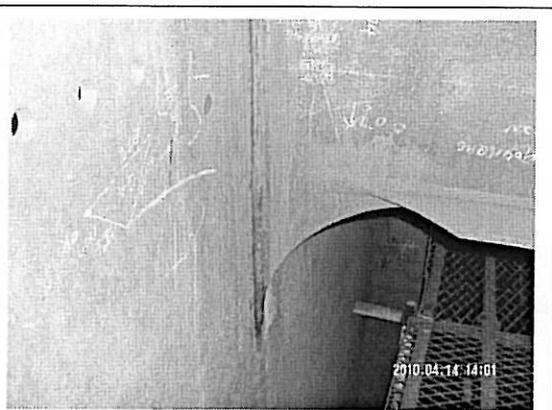
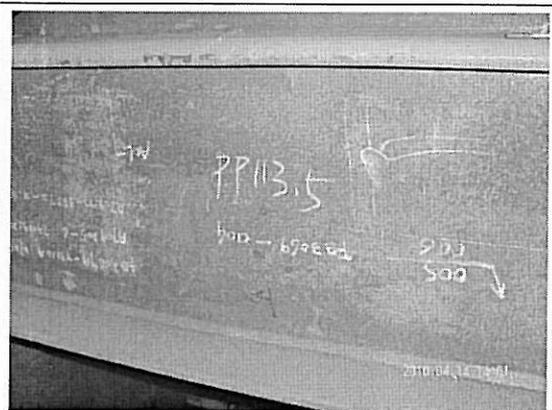
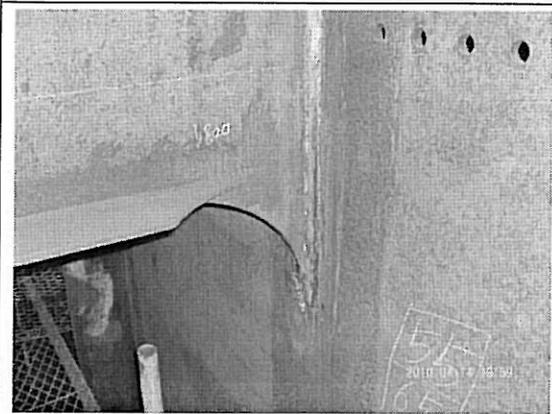
B787-MT-22802

A handwritten signature in black ink, appearing to be "J. W.", is located below the attachment list.

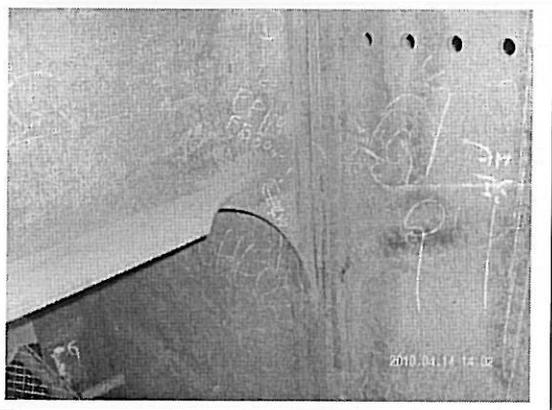
5/6/10

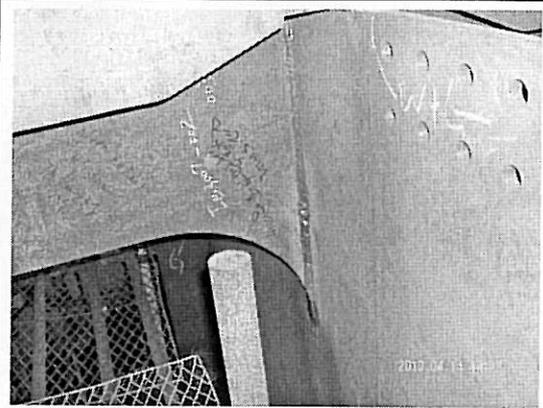
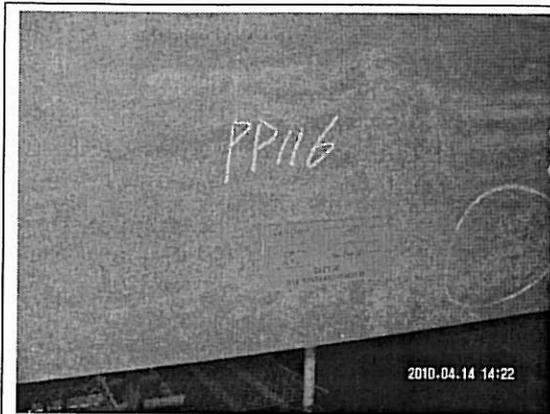


FB3069-002 @ 12CW PP115.5



FB3069-004 @ 12BW PP113.5





FB3007-002 @ 12CE PP116



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NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 11-Dec-2009

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

Dear: Mr. Charles Kanapicki
Job Name: SAS Superstructure

Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Document No: 05.03.06-000463

Subject: NCR No. ZPMC-0473

Reference Description: Out of Flatness Floorbeam components for Lift 12 due to Improper Handling and Storage

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Action Required and/or Action Taken:

Submit a repair plan to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0473

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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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-000500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 01-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0473**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description: **Bridge No:** 34-0006**Component:** Lift 12 OBG Floor Beams**Reference Description:** Out of Flatness Floorbeam components for Lift 12 due to Improper Handling and Storage**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector observed lift 12 Floor Beam components located in Bay 2 that were out of flatness and have been bent due to improper handling and storage. These Floor Beam components were identified as FB3007-002, FB3069-004 and FB3069-002.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Caltrans Standard Specifications 1999

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Section 55-3.01: Workmanship and finish shall be equal to the best general practice in modern bridge shops.

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Wang Wen Bin

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1200 hours, Verbal

QC Inspector's Name: Chen Xi

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



火工校正记录

Heat Straightening Record(HSRI)

报告号 Record #

HSR1(B)-7449

版本号 Revision #

0

日期 Date

2010.01.10

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-0120F4

工程编号 JOB#: ZP06-787

装配 Assembly:	质检代表/Quality Control Representative
部装 Sub-Assembly:	<i>[Signature]</i> 1/10/10
梁段 Gird: 12LIFT	质检经理/Quality Assurance Manager-Approval
塔段 Tower: N/A	<i>[Signature]</i>
焊缝号 Weld No: N/A	
焊缝地图号 Weld Map No: N/A	

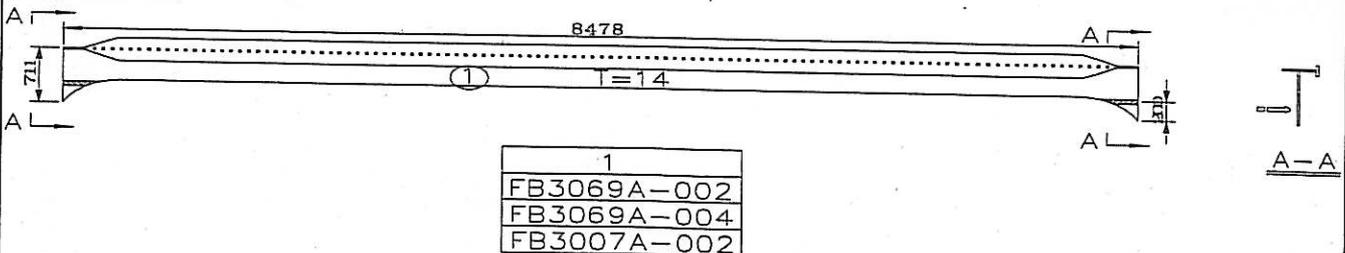
情况描述 Description of Condition

Cause 原因	Bounce distortion 撞击变形
Type of Defect 缺陷类型	Bounce distortion 撞击变形
Inspection Method 检查方法	Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method):	natural gas 天然气
后续NDE(Post-Removal NDE):	After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测.
纠正措施(Corrective Action(s)):	Control current, voltage and weld speed according to relevant WPS. If necessary anti-deformation or hold down device can be added. 依据相应的WPS的要求控制电流, 电压和焊接速度. 如有必要, 可使用反变形设施进行校正.
实施次数(Number of application):	1~3
最高温度(Maximum temperature):	<650°C

简图 Sketch



To be signed when Closing HSR~Verify compliance and all necessary reports are ready to attach

检验员 Inspector:	<i>Li Zhijiang</i>	签字 Signature:	<i>李志江</i>
CWI #	<i>07051321</i>	Closing Date:	<i>2010.1.14</i>
II 级探伤 NDE Certification:	Level II	审核日期 Review Date:	

Note: All repair work shall be performed in accordance with applicable CALTRANS approved procedures, contract specifications and AWS D1.5 2002.

#R787-QCP-1101

Approved by *Li Zhijiang* 1/10/10

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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-000654**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-May-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0473**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: 01-Nov-2009**Description of Non-Conformance:**

The Caltrans Quality Assurance (QA) Inspector observed lift 12 Floor Beam components located in Bay 2 that were out of flatness and have been bent due to improper handling and storage. These Floor Beam components were identified as FB3007-002, FB3069-004 and FB3069-002.

Contractor's proposal to correct the problem:

Perform heat straightening to correct damaged components.

Corrective action taken:

Contractor submitted HSR1 used during repair work along with NDT documentation verifying the member was not damaged by heat straightening.

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

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Jim Simonis, who represents the Office of Structural Materials for your project.

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