

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-000514

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Nov-2009

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

NCR #: ZPMC-0487

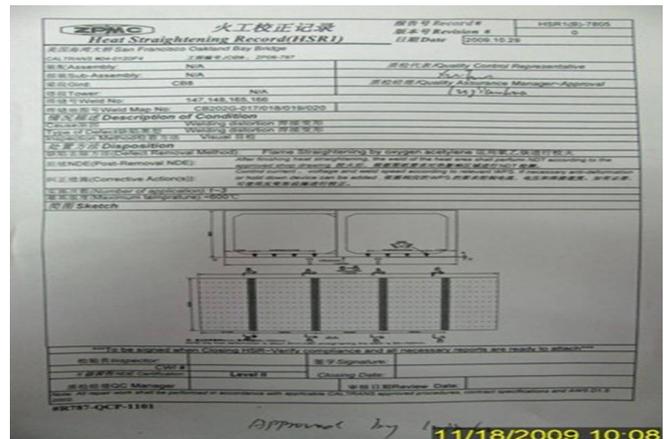
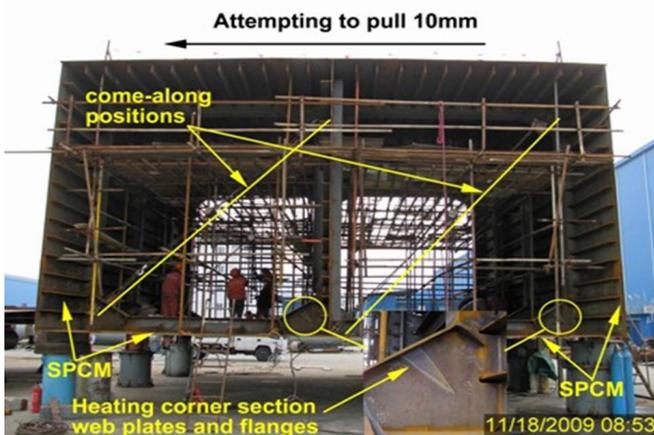
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Cross Beam CB8
Procedural	Procedural	Description:	

Reference Description: Heat Straightening not according to the Heat Straightening Procedure on Crossbeam
 8

Description of Non-Conformance:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an “out of square” condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

SPC 火工校正记录
Heat Straightening Record (HSR)
Project Name: OBG crossbeam CB8
Assembly: OBG
Date: 11/18/2009
Description of Condition: OBG crossbeam CB8
Disposition: N/A
QC Inspector: Zhang Wei
Approved by: Lu Jinhua 11/18/2009 10:08



Applicable reference:

Heat straightening records HSR1 (B)-7805 and HSR1 (B)-7466.

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Kelvin Chueng

Time and method of notification: 1600 hours Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Zhang 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
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
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0487

Job Name: SAS Superstructure
Document No: 05.03.06-000477

Reference Description: Heat Straightening not according to the Heat Straightening Procedure on Crossbeam 8

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: Xbeam **Lift:** 08

Remarks:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.

Action Required and/or Action Taken:

Submit HSR to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0487

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: 05.03.06-000477

Subject: NCR No. ZPMC-0487

Dated: 16-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000596 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will provide the heat straightening report used when available. Based on this ZPMC request that this proposal be approved with action pending.

Per Caltrans' comments to ABFJV's proposed response, ZPMC will provide the heat straightening report used when available. Based on this ZPMC request that this proposal be approved with action pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000596R00

Caltrans' comments:

Status: AAP

Date: 17-Feb-2010

AAP approved.

Submitted by: Howe, Bill

Date: 17-Feb-2010

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000477

Subject: NCR No. ZPMC-0487

Dated: 07-Apr-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000596 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing dimensional data to show that the heat straightened member is now within dimensional tolerances. Based on this ZPMC requests closure of this NCR.

ZPMC is attaching the HSR1 used which reflect the conditions noted by the inspector in the NCR. ZPMC is providing dimensional data to show that the heat straightened member is now within dimensional tolerances. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000596R01;

Caltrans' comments:

Status: REJ

Date: 25-Apr-2010

The heat straightening methods used did not comply with HSR1. Please submit a revised HSR reflecting the methods use.

Submitted by: Eagen, Sean

Attachment(s):

Date: 25-Apr-2010



No. B-724

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-4-6

REGARDING: NCR-000514(ZPMC-0487)

ZPMC acknowledges this problem and has issued the corrected HSR1. ZPMC is providing the HSR1s and the checking report show the acceptable of these heat straightening performing and is requesting this NCR to be closed.

ATTACHMENT:

NCR-000514(ZPMC-0487)

HSR1(B)-7466

#787-B-QCR-202-B7706

HSR1(B)-7805

#787-B-QCR-202-B7705

A handwritten signature in black ink, appearing to be 'Jim W'.

4/7/10



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: 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: 05.03.06-000477
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- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: Xbeam

Lift: 08

Remarks:

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Action Required and/or Action Taken:

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Transmitted by: Bill Howe

Attachments: ZPMC-0487

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
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000514

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Nov-2009

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

NCR #: ZPMC-0487

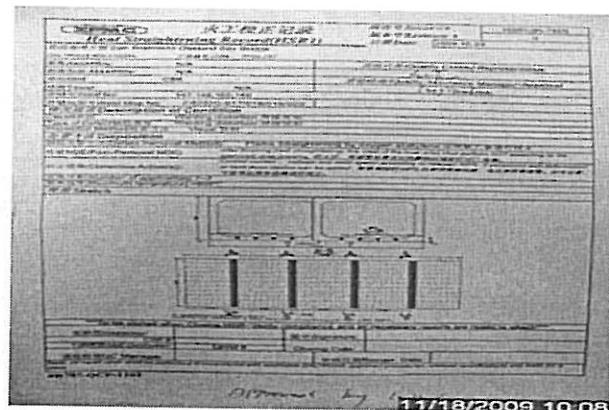
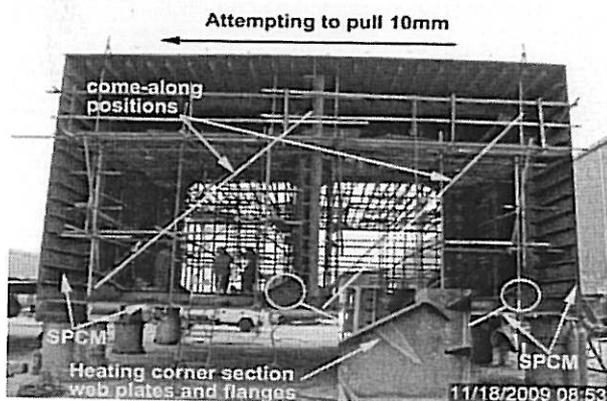
Type of problem:

Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** Cross Beam CB8
 Procedural **Procedural** **Description:**

Reference Description: Heat Straightening not according to the Heat Straightening Procedure on Crossbeam
 8

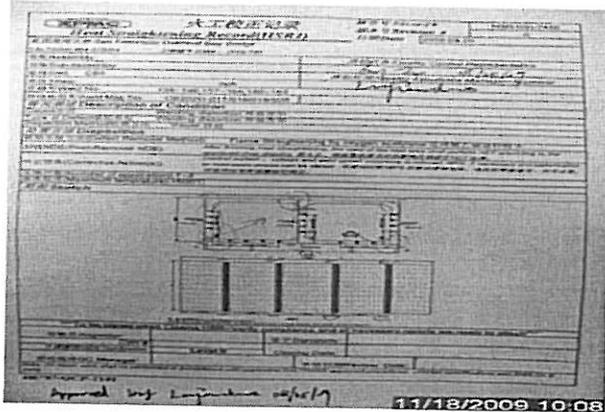
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Heat straightening records HSR1 (B)-7805 and HSR1 (B)-7466.

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Kelvin Chueng

Time and method of notification: 1600 hours Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Zhang 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



火工校正记录

报告号 Record#

HSR1(B)-7466

Heat Straightening Record(HSR1)

版本号 Revision #

0

日期 Date

2009.08.25

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:

Signature 2009.8.25

梁段 Gird: CB8

质检经理/Quality Assurance Manager-Approval

塔段 Tower: N/A

Signature

焊缝号 Weld No: 139~146, 157~164, 180~183

焊缝地图号 Weld Map No: CB202G-017/018/019/020

情况描述 Description of Condition

Cause原因: Welding distortion 焊接变形

Type of Defect缺陷类型: Welding distortion 焊接变形

Inspection Method检查方法: Visual 目视

处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

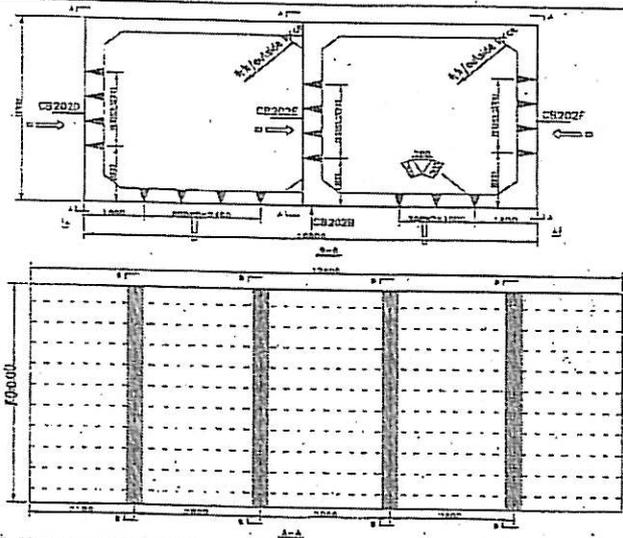
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行 NDT 检测.

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): <600 °C

简图 Sketch



校火结束时间
2009.11.23

注: 校火时25mm, 最大50-100mm.
NOTE: the max deformation is about 5mm, heat straightening the width is 50-100mm.

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

检验员 Inspector:	<i>Li Jia</i>	签字 Signature:	<i>Li Jia</i>
CWI #	<i>0804711</i>	Closing Date:	<i>2010-3-17</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 Jia* 8/25/09

美国钢桥钢板平整度火工校正检查记录卡

The report of steel plate heat straightening process checking



工程编号 The serial no. of project:	2006-787	图号 The drawing no.:	C88	构件名称 Part name:	C88 木黄梁
材质 Material:		炉批号 The heat no. of plate:		桥段名称 Section name:	
移框是否正确 Material mark checking:	正确	轧制方向标注是否正确 Rolling direction checking:	正确		

火工校正温度控制 The temperature record of heat straightening

检查时间 Checking time:	08:24	13:45	08:50	10:06	13:50	16:02			
测量温度 Measure result:	316	325	340	308	372	338			

校火前平整度测量 Flatness checking before heat straightening (mm)

测量点 Measure position:	A	B	C	D	E	F	G	H	I	J	M
测量值 Measure result:	4	4	5	3	4	4	4	5	3	3	4

校火后平整度测量 Flatness checking after heat straightening (mm)

测量点 Measure position:	A	B	C	D	E	F	G	H	I	J	M
测量值 Measure result:	1	1	1	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5

整体平整度/钢板垂直度是否合格
Heat straightening result:

合格

检验员
QC inspector:

刘健华

日期
Date:

2009.11.25

若校正影响焊缝,请填写以下项目
Fill the following items if the straightening affects the weld

对应NDT报告编号
NDT report no.

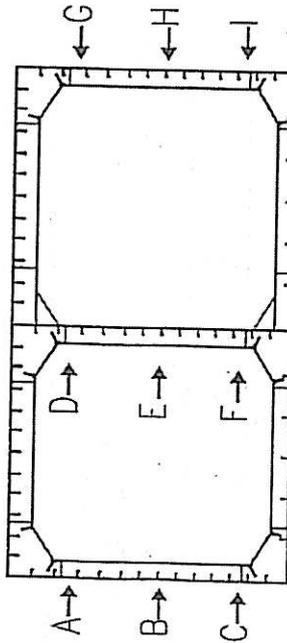
UT
MT Acc
RT

NDT检验员签字
NDT inspector:

XU JIANG

日期
Date:

2010.03.10



HSR1(B) 7466



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7805

版本号 Revision #

0

日期 Date

2009.10.29

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-D120F4

工程编号 JOB#: ZP08-787

装配 Assembly:

质检代表/Quality Control Representative

部装 Sub-Assembly:

梁段 Gird: CB8

质检经理/Quality Assurance Manager-Approval

塔段 Tower:

N/A

焊缝号 Weld No:

147,148,165,166

焊缝地图号 Weld Map No:

CB202G-017/018/019/020

情况描述 Description of Condition

Cause 原因

Welding distortion 焊接变形

Type of Defect 缺陷类型

Welding distortion 焊接变形

Inspection Method 检查方法

Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method):

Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

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.

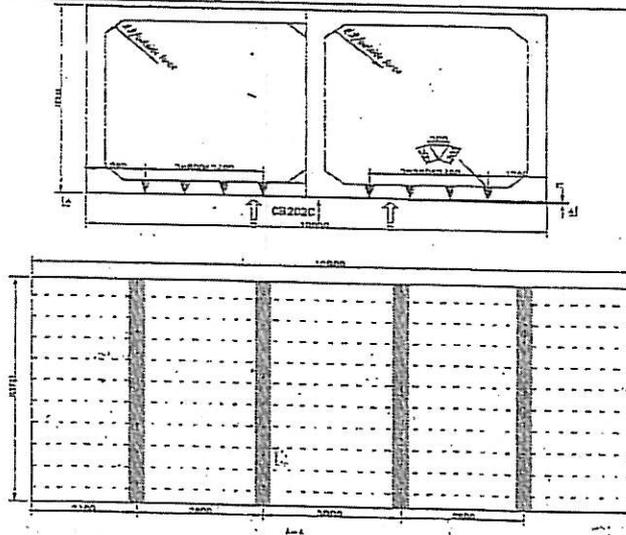
纠正措施(Corrective Action(s)):

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): <600°C

简图 Sketch



注: 火焰校正片5mm, 校正区50-100mm
 NOTE: the max deformation is about 5mm, heat straightening the width is 50-100mm.

校火结束时间
 2009.11.13

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

检验员 Inspector:	LJL	签字 Signature:	LJL
CWI #	8804711	Closing Date:	2010-3-17
II 级探伤 NDE Certification:	Level II	质检经理 QC Manager	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 Lujianhua 10/29/09

787-B-QCR-202-2705



美国钢桥钢板平整度火工校正检查记录卡

The report of steel plate heat straightening process checking

工程编号 The serial no. of project: 2706-787
 图号 The drawing no.: C88
 材料 Material: C88 热轧梁
 炉批号 The heat no. of plate: C88
 轧制方向标注是否正确 Rolling direction checking: 正确

火工校正温度控制 The temperature record of heat straightening

检查时间 Checking time:	07:42	08:30	09:25	10:14	11:20	15:06	08:42	09:10	15:10
测量温度 Measure result:	370	420	380	416	430	390	370	425	406

校火前平整度测量 Flatness checking before heat straightening (mm)

测量点 Measure position:	J	K	L	M	N				
测量值 Measure result:	1.6	5.5	4.3						

校火后平整度测量 Flatness checking after heat straightening (mm)

测量点 Measure position:	J	K	L	M	N				
测量值 Measure result:	0.5	1.1	0.5	0.15					

整体平整度/筋板垂直度是否合格
Heat straightening result: 合格

检验员
QC inspector: 李明强

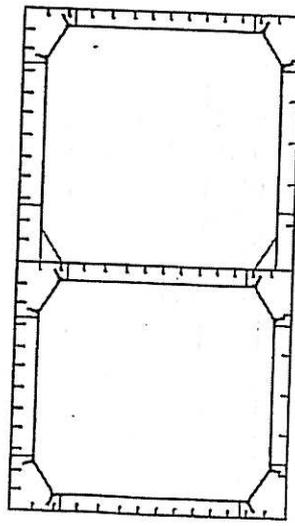
日期
Date: 2009.11.25

若校正影响焊缝, 请填写以下项目
Fill the following items if the straightening affects the weld

对应NDT报告编号
NDT report no. UT

NDT检验员签字
NDT inspector: 王小明

日期
Date: 2010.03.10



ASR(1B)7805

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000477

Subject: NCR No. ZPMC-0487

Dated: 25-May-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000596 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: Per the Engineer's most recent NPR response, ZPMC is providing the revised HSR1 documents used during the heat straightening observed by Caltrans

Per the Engineer's most recent NPR response, ZPMC is providing the revised HSR1 documents used during the heat straightening observed by Caltrans which depict the use of "outside force", i.e. winches and chains during heat straightening. Also attached are higher resolution copies of the HSR1 when magnified show the changes ZPMC has made in the revision of the HSR1. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000596R02;

Caltrans' comments:

Status: REJ

Date: 30-May-2010

The provided HSR1 does not accurately reflect the locations where heat was applied and which welds have been affected. As discussed, please provide a revised HSR1 accurately describing 1) the methods used, 2) the locations of heat application, and 3) the welds affected by the head application/straightening.

Submitted by: Eagen, Sean

Attachment(s):

Date: 30-May-2010



No. B-740

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-4-30

REGARDING: NCR-000514(ZPMC-0487)

ZPMC is providing the revised HSR(1)s what show the methods used for the heat straightening. Based on the previous response and the attached documentations, ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000514(ZPMC-0487)

HSR1(B)-7805 R1

HSR1(B)-7466 R1

A handwritten signature in black ink, appearing to be 'J. W.' or similar, written in a cursive style.

4/30/10



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: 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: 05.03.06-000477

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- Non-Conformance Resolved.

Material Location: Xbeam

Lift: 08

Remarks:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.

Action Required and/or Action Taken:

Submit HSR to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0487

cc: Rick Morrow, Gary Pursell, Peter Siegenihaler, 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-000514

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 18-Nov-2009

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

NCR #: ZPMC-0487

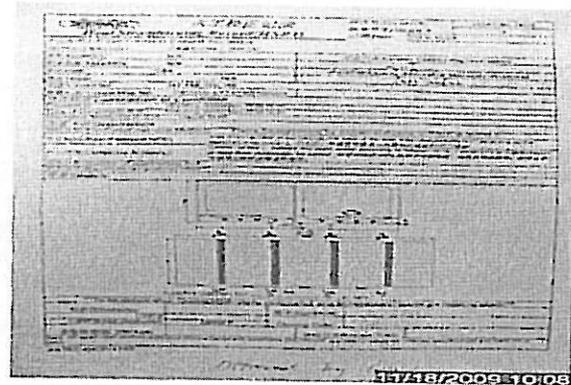
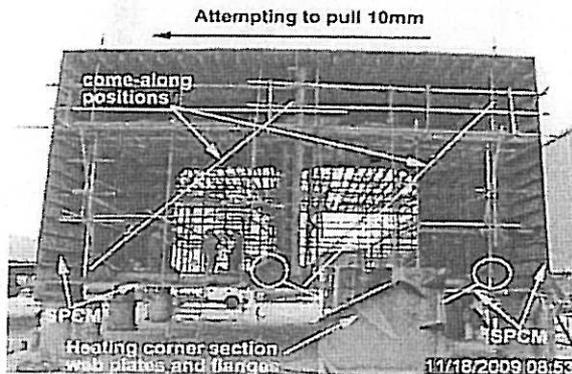
Type of problem:

Welding Concrete Other
Welding Curing Procedural Bridge No: 34-0006
Joint fit-up Coating Other Component: Cross Beam CB8
Procedural Procedural Description:

Reference Description: Heat Straightening not according to the Heat Straightening Procedure on Crossbeam
8

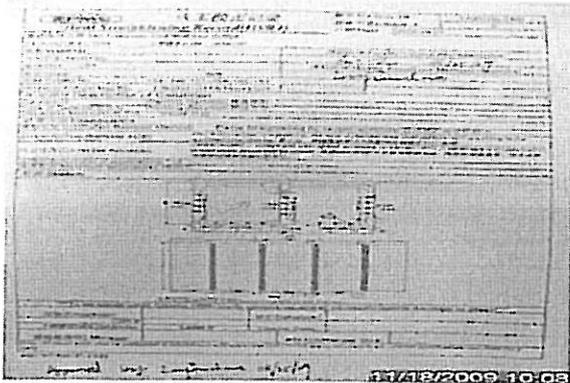
Description of Non-Conformance:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Heat straightening records HSR1 (B)-7805 and HSR1 (B)-7466.

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Kelvin Chueng

Time and method of notification: 1600 hours Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Zhang 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



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7805

版本号 Revision #

1

日期 Date

2009.10.29

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> 2009.10.29
梁段 Gird: CB8	质检经理/Quality Assurance Manager-Approval
塔段 Tower: N/A	<i>[Signature]</i>
焊缝号 Weld No: 147,148,165,166	
焊缝地图号 Weld Map No: CB202G-017/018/019/020	

情况描述 Description of Condition

Cause 原因	Welding distortion 焊接变形
Type of Defect 缺陷类型	Welding distortion 焊接变形
Inspection Method 检查方法	Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

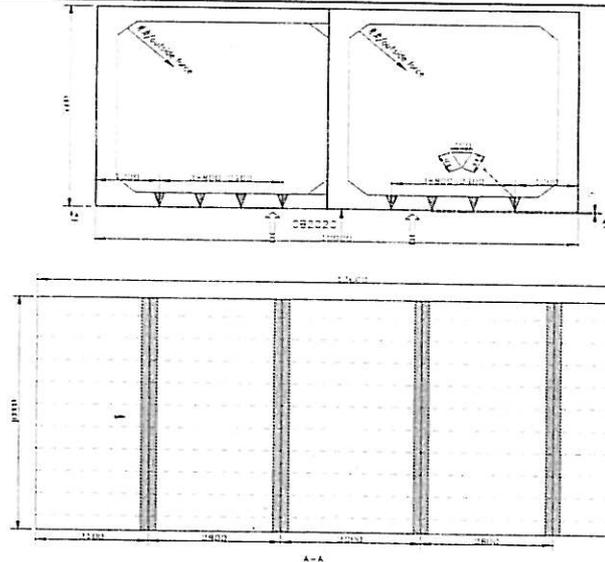
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测。

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): <600°C

简图 Sketch



注: 最大变形量85mm, 热影响区50-100mm.
NOTE: the max deformation is about 85mm, heat straightening the width is 50-100mm.

H.S.D:

2009.11.23

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

检验员 Inspector:	Li Jia	签字 Signature:	Li Jia
CWI #	08021711	Closing Date:	2010-3-17
II 级探伤 NDE Certification:	Level II		
质检经理 QC Manager	<i>[Signature]</i>	审核日期 Review Date:	3/17/10

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 *[Signature]* 10/29/10



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7466

版本号 Revision #

1

日期 Date

2009.08.25

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:	
梁段 Gird: CB8	质检经理 / Quality Assurance Manager~Approval
塔段 Tower: N/A	
焊缝号 Weld No: 139~146, 157~164, 180~183	
焊缝地图号 Weld Map No: CB202G-017/018/019/020	

情况描述 Description of Condition

Cause 原因 Welding distortion 焊接变形

Type of Defect 缺陷类型 Welding distortion 焊接变形

Inspection Method 检查方法 Visual 目检

处置方法 Disposition

缺陷去除方法 (Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

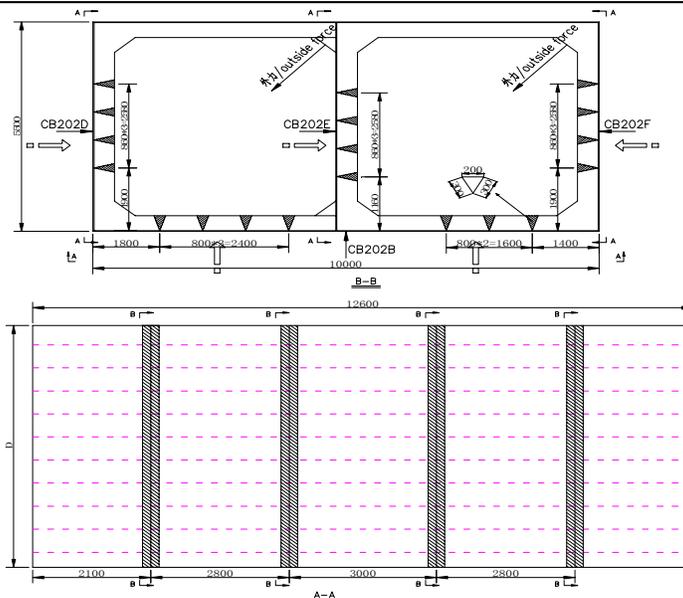
后续 NDE (Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行 NDT 检测。

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): <600°C

简图 Sketch



注: 最大变形量5mm, 校火宽度50~100mm.
NOTE: the max deformation is about 5mm, heat straightening the width is 50~100mm.

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

检验员 Inspector:		签字 Signature:	
CWI #		Closing Date:	
II 级探伤 NDE Certification:	Level II		
质检经理 QC Manager		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.



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7466

版本号 Revision #

1

日期 Date

2009.08.25

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>Li Jia - 2009.8.25</i>
梁段 Gird: CB8	质检经理/Quality Assurance Manager~Approval
塔段 Tower: N/A	<i>Li Jia</i>
焊缝号 Weld No: 139~146, 157~164, 180~183	
焊缝地图号 Weld Map No: CB202G-017/018/019/020	

情况描述 Description of Condition

Cause 原因	Welding distortion 焊接变形
Type of Defect 缺陷类型	Welding distortion 焊接变形
Inspection Method 检查方法	Visual 目检

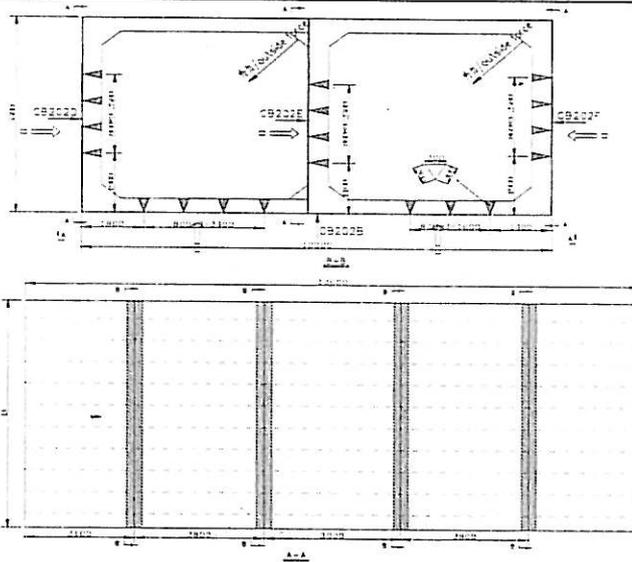
处置方法 Disposition

缺陷去除方法(Defect Removal Method):	Flame Straightening by oxygen acetylene 运用氧乙炔进行校火
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 temprature): <600°C

简图 Sketch



注: 最大变形量约5mm, 校火宽度50~100mm.
NOTE: the max deformation is about 5mm, heat straightening the width is 50~100mm.

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

检验员 Inspector:	<i>Li Jia</i>	签字 Signature:	<i>Li Jia</i>
CWI #	<i>08021711</i>	Closing Date:	<i>2010-3-17</i>
II 级探伤 NDE Certification:	Level II		
质检经理 QC Manager	<i>Li Jia</i>	审核日期 Review Date:	<i>3/17/10</i>

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 Jia 8/25/09



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7805

版本号 Revision #

1

日期 Date

2009.10.29

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:	
梁段 Gird: CB8	质检经理 / Quality Assurance Manager~Approval
塔段 Tower: N/A	
焊缝号 Weld No: 147,148,165,166	
焊缝地图号 Weld Map No: CB202G-017/018/019/020	

情况描述 Description of Condition

Cause原因 Welding distortion 焊接变形

Type of Defect缺陷类型 Welding distortion 焊接变形

Inspection Method检查方法 Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

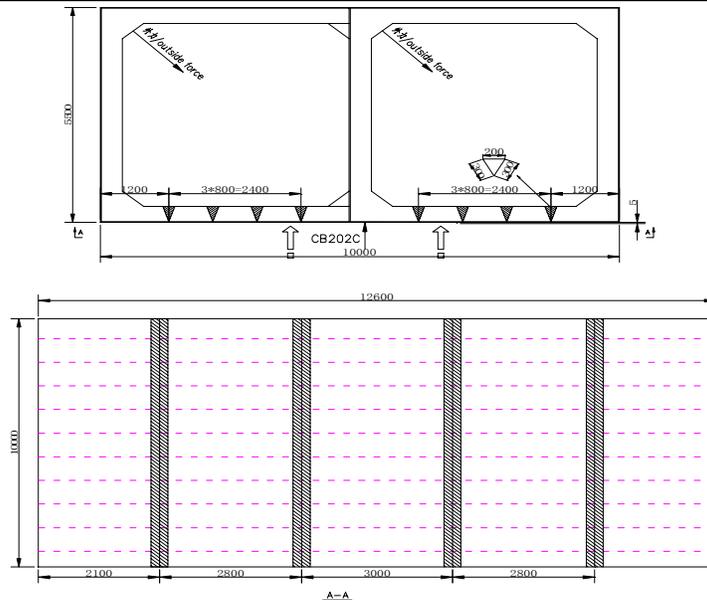
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测。

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): <600°C

简图 Sketch



注: 最大变形量5mm, 校火宽度50~100mm.
NOTE: the max deformation is about 5mm, heat straightening the width is 50~100mm.

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

检验员 Inspector:		签字 Signature:	
CWI #		Closing Date:	
II 级探伤 NDE Certification:	Level II		
质检经理 QC Manager		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.

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000477

Subject: NCR No. ZPMC-0487

Dated: 09-Jun-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000596 Rev: 03

Contractor's Proposed Resolution:

Reference Resolution: Per discussion with the Engineer, the HSRs have been revised to depict the welds heat straightened and subsequently tested and accepted. Based on this ZPMC requests closure of this NCR.

Per discussion with the Engineer, the HSRs have been revised to depict the welds heat straightened and subsequently tested and accepted. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000596R03;

Caltrans' comments:

Status: CLO

Date: 13-Jun-2010

This proposed resolution is acceptable. The Department concurs that Non-Conformance ZPMC-0487 is closed.

Submitted by: Eagen, Sean

Date: 13-Jun-2010

Attachment(s):



No. B-782

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-6-8

REGARDING: NCR-000514(ZPMC-0487)

ZPMC is providing the revised HSR1 for engineer to review and is excepting the closure of this NCR.

ATTACHMENT:

NCR-000514(ZPMC-0487)

HSR1(B)-7805 R1

HSR1(B)-7466 R2

A handwritten signature in black ink, appearing to be "J. J. 2", is located below the attachment list.

6/8/10

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

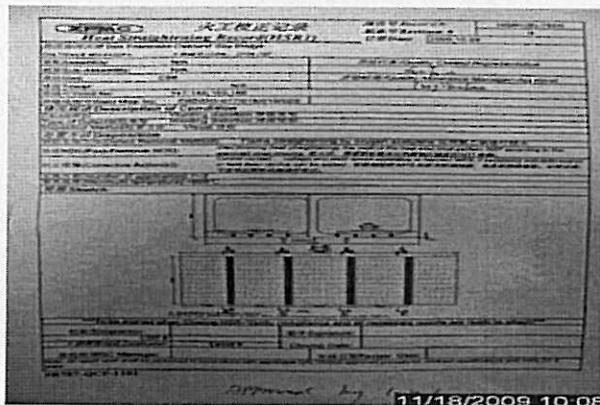
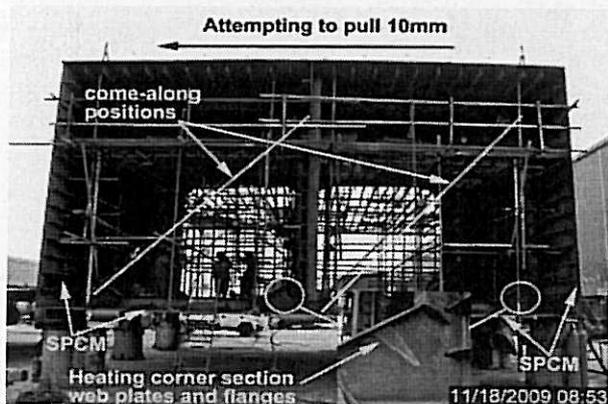
File #: 69.25B

**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000514**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0487**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:**Bridge No:** 34-0006**Component:** Cross Beam CB8**Reference Description:** Heat Straightening not according to the Heat Straightening Procedure on Crossbeam

8

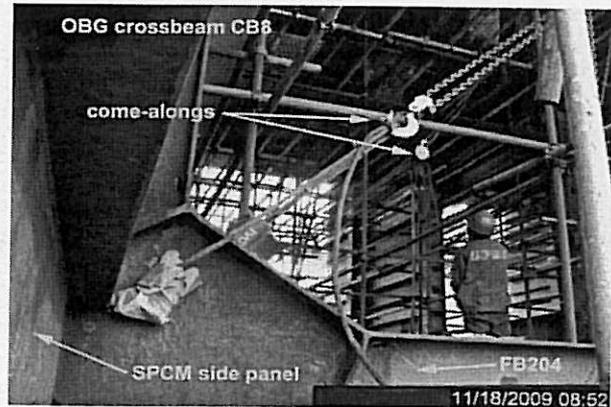
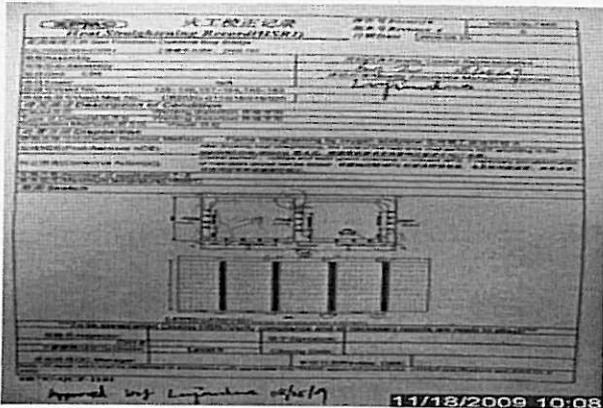
Description of Non-Conformance:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Heat straightening records HSR1 (B)-7805 and HSR1 (B)-7466.

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Kelvin Chueng

Time and method of notification: 1600 hours Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1700 hours, Verbal

QC Inspector's Name: Zhang 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
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: 05.03.06-000477

Subject: NCR No. ZPMC-0487

Reference Description: Heat Straightening not according to the Heat Straightening Procedure on Crossbeam 8

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: Xbeam **Lift:** 08

Remarks:

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.

Action Required and/or Action Taken:

Submit HSR to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0487

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

File: 05.03.06



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record#

HSR1(B)-7466

版本号 Revision #

2

日期 Date

2009.08.25

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:

梁段 Gird: CB8

质检经理/Quality Assurance Manager-Approval

塔段 Tower:

N/A

焊缝号 Weld No:

180~183

焊缝地图号 Weld Map No:

CB202G-017/018/019/020

情况描述 Description of Condition

Cause 原因

Welding distortion 焊接变形

Type of Defect 缺陷类型

Welding distortion 焊接变形

Inspection Method 检查方法

Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method):

Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

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。

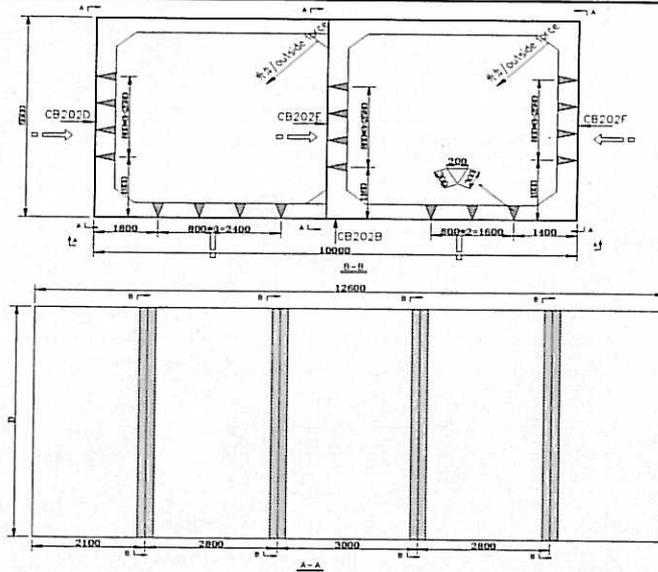
纠正措施(Corrective Action(s)):

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): <600°C

简图 Sketch



H.S. Date:

2009.11.23

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

检验员 Inspector:

签字 Signature:

CWI #

II 级探伤 NDE Certification:

Level II

Closing Date:

质检经理 QC Manager

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 [Signature] 10/29/09



火工校正记录

Heat Straightening Record(HSR1)

报告号 Record #

HSR1(B)-7805

版本号 Revision #

1

日期 Date

2009.10.29

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-0120F4

工配编号 JOB#: ZP06-767

装配 Assembly:	质检代表/Quality Control Representative
部装 Sub-Assembly:	<i>Li Jia</i> 2009.10.29
梁段 Gird: CB8	质检经理/Quality Assurance Manager-Approval
塔段 Tower: N/A	<i>Li Jianhua</i>
焊缝号 Weld No: 147,148,165,166	
焊缝地图号 Weld Map No: CB202G-017/018/019/020	

情况描述 Description of Condition

Cause原因 Welding distortion 焊接变形

Type of Defect缺陷类型 Welding distortion 焊接变形

Inspection Method检查方法 Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔运行校火

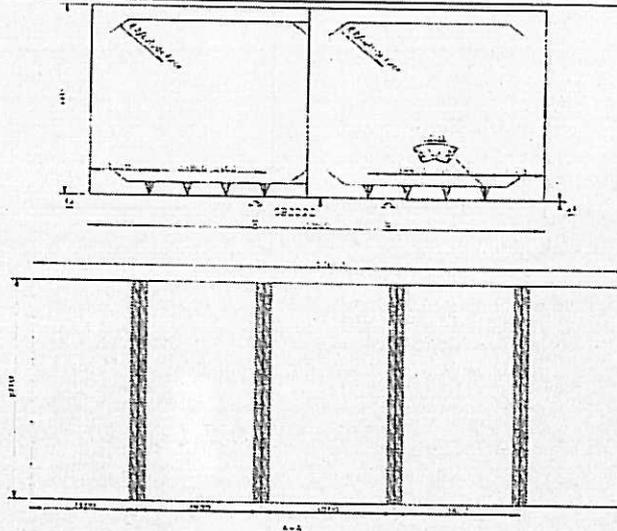
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行NDT检测.

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): <600 °C

简图 Sketch



H.S.D:

2009.11.23

NOTE: the max deformation is 30mm after straightening the weld is 50-100mm

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

检验员 Inspector:	<i>Li Jia</i>	签字 Signature:	<i>Li Jia</i>
CWI #	08021711	Closing Date:	2010-3-17
II 级探伤 NDE Certification:	Level II	质检经理 QC Manager:	<i>Li Jianhua</i>
		审核日期 Review Date:	3/17/10

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 Jianhua* 10/29/09

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
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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-000685**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 09-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0487**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: 18-Nov-2009**Description of Non-Conformance:**

This Quality Assurance (QA) inspector observed ZPMC personnel attempting to correct an "out of square" condition on OBG crossbeam CB8. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate diaphragm panel. This QA also observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. These procedures and the description of the distortion were not documented in the two Heat Straightening Records HSR1(B)-7466 and 7805 dated 8/25/2009. The work performed is not in compliance in the ZPMC internal approved HSR documents.

Contractor's proposal to correct the problem:

Submit HSR1 depicting actual methods used during repair work and perform NDT required to verify weld quality.

Corrective action taken:

Contractor has provided the Department with a revised HSR1 detailing methods used to perform heat straightening. Subsequent survey data and NDT reports were also provided to the Department verifying dimensional issues were rectified and welds are in conformance with Contract weld quality requirements.

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.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer