

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-000407**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0381**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** Crossbeam 14**Procedural****Procedural****Description:****Reference Description:** Heat Straightening without Engineer's Approval on CB10**Description of Non-Conformance:**

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Contract Special Provisions 8-3.01 “for material equal to or less than 16mm, the contractor shall not heat straighten members more than 6 in 1000 without prior approval of the Engineer”.

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Mike Williams

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 0730 hours, Verbal

QC Inspector's Name: Li Zhi Jiang

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:	Tsang, Eric	SMR
----------------------	-------------	-----

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: 15-Sep-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: 05.03.06-000370

Subject: NCR No. ZPMC-0381

Reference Description: Heat Straightening without Engineer's Approval on CB10

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:** 10

Remarks:

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.

Action Required and/or Action Taken:

Indicate to the engineer if the weld integrity was compromised during the non approved heat straightening procedure.

Transmitted by: Bill Howe

Attachments: ZPMC-0381

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000370

Subject: NCR No. ZPMC-0381

Dated: 16-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000376 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will submit the HSR1 used for this instance of heat straightening and NDT documentation showing that the weld was not adversely affected.

ZPMC acknowledges that Engineer approval was required in this case. ZPMC will submit the HSR1 used for this instance of heat straightening and NDT documentation showing that the weld was not adversely affected. These documents will be submitted at a later date. ZPMC requests that this non conformance proposed resolution be approved, with action pending.

Submitted by:

Attachment(s): ABF-NPR-000376R00

Caltrans' comments:

Status: AAP

Date: 05-Apr-2011

The Contractor's proposed resolution is accepted with actions pending to close the NCR.

Submitted by: Chao, Ching

Date: 06-Apr-2011

Attachment(s): NPR CT Comments

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000370

Subject: NCR No. ZPMC-0381

Dated: 01-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000376 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the HSR1 and related NDT to show that the affected welds are acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC acknowledges that the heat straightening documented in the NCR required Engineer approval. ZPMC is providing the HSR1 and related NDT to show that the affected welds are acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000376R01;

Caltrans' comments:

Status: CLO

Date: 13-Dec-2009

The documentation submitted has been reviewed by the Engineer and is found to be acceptable.

Submitted by: Chao, Ching

Attachment(s):

Date: 13-Dec-2009



No. B-509

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-12-01

REGARDING: NCR-000407(ZPMC-0381)

With this letter of response, ZPMC requests closure for Caltrans NCR-000407 (ZPMC-0381). It mentioned that QA observed heat straightening was performing without approval.

ZPMC acknowledges that engineer approval was required in this case. The deviation recorded in this HSR1 was measured with compressive stress. So it's incorrect. ZPMC will submit the HSR1 used for this instance of heat straightening. VT, MT & UT were performed after that and to warrant the affected welds quality.

So ZPMC provide the NDT documentation showing that the welds were not adversely affected, hoping Caltrans could take a review and consider close this NCR. ZPMC will enhance the review for HSR1. And will ask for engineer's approval if it's out of tolerance in the future.

ATTACHMENT:

NCR-000407 (ZPMC-0381)

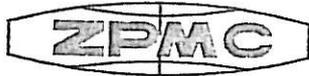
HSR(B)-7358

B-VT-40193

B787-UT-8784

B787-MT-13846

Long
12/01/09



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B
项目名称: 美国加州海湾大桥

NCR Number:
NCR 编号: NCR-B-260 (ZPMC-0381)

Item: Heating Straightening without Engineer's Approval on CB14
名称描述: CB14 校火过程中没有工程师正式批准

Item Number:
件号:

Drawing:
图号: CB14

Location: BAY 3
位置: 3 车间

Date:
日期: 2009-9-19

Description of Nonconformance:

不符合项状态描述:

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.

加州检验员发现 ZPMC 在校火 15mm 厚的材料过程中没有工程师正式批准。此过程发生在加州检验员在车间发现 (HSR1(B)-7358) 上指出有 5mm 变形。加州检验员实际测出的尺寸是 1000mm 中有 24mm。此焊缝是 CB202E-014-001。

Work By:

施工方: Liu jin Fei

Prepared by:

准备:

Zhangwei

Reviewed by QCE:

质量工程师批准:

Chen Shuang
2009.9.19

Drawing Error

图纸错误

Material Defect

材料缺陷

Fabrication Error

制作错误

Other

其他原因

Disposition:

处理措施:

Use as is

回用

Repair

返修

Reject

拒收

Recommendation:

建议:

Prepared by:

准备

Approved by QCA:

质量经理批准

Reason for Nonconformance:

不符合原因: 1. The component wasn't in nature, the data after measure was in range.

1. 现场带班, 检验员在对该板单元测量时不在自然状态, 上面有

SO issue Heat Straightening Record without report.

其他东西物五位, 测量数据没有超出规定范围, 即开出检验报告

Prevention of Re-occurrence:

预防措施:

1. 测量此类板单元时, 让物件放在自然状态后测量, 得最原始数据

2. 校正时, 检验员应及时发现数据超出规定范围

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/ALARte: 80 PM: 13.2/13.9
File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000407

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 30-Aug-2009

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

NCR #: ZPMC-0381

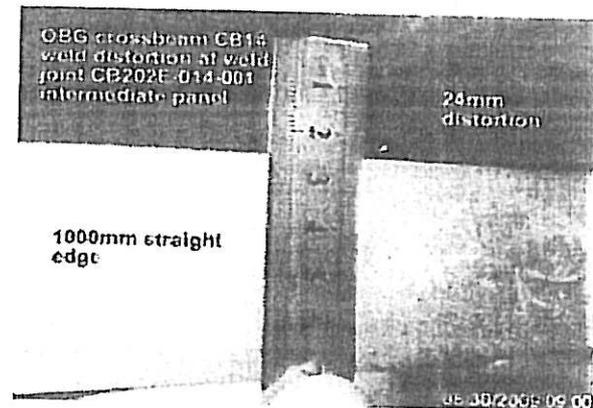
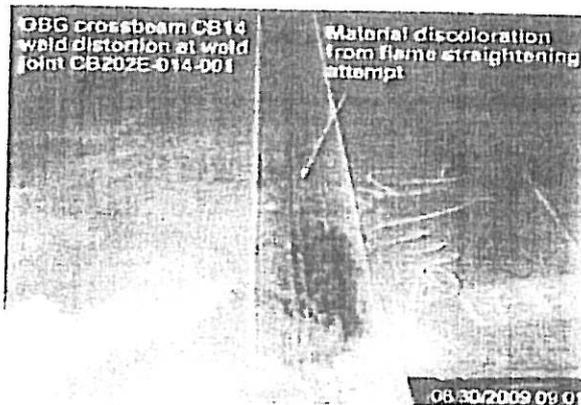
Type of problem:

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

Reference Description: Heat Straightening without Engineer's Approval on CB10

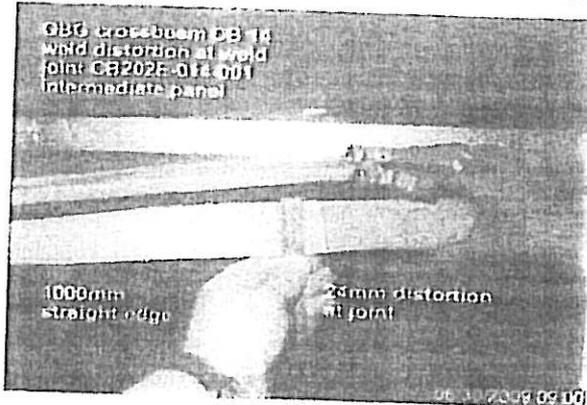
Description of Non-Conformance:

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Contract Special Provisions 8-3.01 "for material equal to or less than 16mm, the contractor shall not heat straighten members more than 6 in 1000 without prior approval of the Engineer".

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Mike Williams

Time and method of notification: 1100 hours, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 0730 hours, Verbal

QC Inspector's Name: Li Zhi Jiang

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: Tsang, Eric

SMR

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: 15-Sep-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: 05.03.06-000370

Subject: NCR No. ZPMC-0381

Reference Description: Heat Straightening without Engineer's Approval on CB10

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: 10

Remarks:

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.

Action Required and/or Action Taken:

Indicate to the engineer if the weld integrity was compromised during the non approved heat straightening procedure

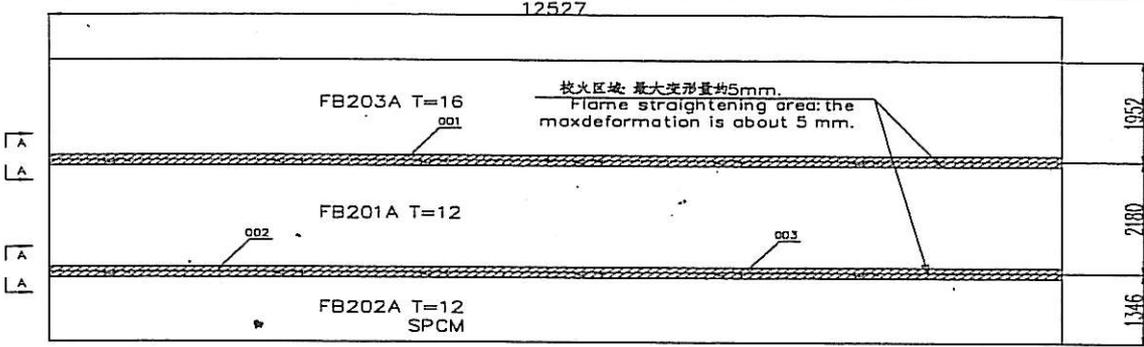
Transmitted by: Bill Howe

Attachments: ZPMC-0381

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

File: 05.03.06

VF36734, UF8244
VF4493, MT-13846, UF8784

 火工校正记录 Heat Straightening Record (HSR1)		报告号 Record #	HSR1(B)-7358
		版本号 Revision #	0
		日期 Date	2009.08.11
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:	2009.8.11		
梁段 Gird: CB14	质检经理/Quality Assurance Manager-Approval		
塔段 Tower: N/A	Lijianhua		
焊缝号 Weld No: 001, 002, 003			
焊缝地图号 Weld Map No: CB202E-014			
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,	
实施次数(Number of application): 1-3			
最高温度(Maximum temperature): <650°C			
简图 Sketch			
 <p>12527</p> <p>FB203A T=16 001</p> <p>校火区域: 最大变形量约5mm. Flame straightening area: the max deformation is about 5 mm.</p> <p>FB201A T=12 002</p> <p>003</p> <p>FB202A T=12 SPCM</p> <p>1952</p> <p>2180</p> <p>1346</p> <p>火枪枪(hand Torch)</p> <p>配重块(Countweight)</p> <p>反面(FS)</p> <p>正面(NS)</p> <p>A-A</p> <p>校火宽度约50~100mm the heat straightening width is about 50~100mm.</p>			
Heat straightening Date 09.8.15			
To be signed when Closing HSR~Verify compliance and all necessary reports are ready to attach			
检验员 Inspector:	chen xi	签字 Signature:	chen xi
CWI #	97072021	Closing Date:	09.10.14
II 级探伤 NDE Certification:	Level II	质检经理 QC Manager	Lijianhua
审核日期 Review Date:	09.10.19		
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 Lijianhua 8/12/09



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-8784 DATE 2009.09.22 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: OBG CROSS BEAM DRAWING NO.: CB202E CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345F2-X 12/16mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									a	b	c	d	Length 长度		
CB202E-014-001		70												ACC.	100%
CB202E-014-002		70												ACC.	100%
CB202E-014-003		70												ACC.	100%

AFTER HSR1(B)-7358, HSR(B)-318, B-WR7050, 7474

BLANK

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

EXAMINED BY 主探 <i>Hanfeng</i> LEVEL - II SIGN / DATE 质量经理 / QCM 签字 SIGN / 日期 DATE	REVIEWED BY 审核 <i>Zhuifeng</i> LEVEL - II SIGN / DATE 用户 CUSTOMER 签字 SIGN / 日期 DATE
---	---



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-13846		DATE 日期 2009.09.20		PAGE OF 页码 1/1		Revision No: 0	
PROJECT NO. 工程编号: ZP06-787				CONTRACTOR: 用户: CALTRANS			
DRAWING NO. 图号: CB202E OBG Cross Beam CB14				CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4			
REFERENCING CODE 参考规范编码 AWS D1.5-2002		ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002		PROCEDURE NO. 程序编号 ZPQC-MT-01		CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2009	
EQUIPMENT 设备 MT YOKE		MANUFACTURER 制造商 PARKER		MODEL NO. 样式编号 B310S		SERIAL NO. 连续编号 5395 5617 5620	
MAGNETIZING METHOD 磁化方法		Continuous magnetic yoke 磁轭式连续法		CURRENT 电流		AC	
PARTICLE TYPE 磁粉类型		Dry magnet powder 干磁粉		YOKE SPACING 磁轭间距		70~150mm	
MATERIAL TO BE EXAMINED 检测材料		<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造		Material & thickness 母材, 厚度		A709M-345F2-X 12/16 mm	
WELDING PROCESS 焊接方法		SAW		TYPE OF JOINT 焊缝类型		BUTT	
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				
CB202E-014-001				ACC.		100%MT	
CB202E-014-002				ACC.		100%MT	
CB202E-014-003				ACC.		100%MT	
AFTER HSR1(B)-7358, HSR(B)-318							
AFTER B-WR7050, 7474							
BLANK							
EXAMINED BY 主探 Jin Jianting <i>Jin Jianting</i> 09.09.20				REVIEWED BY 审核 <i>Shan...</i> 09.09.20			
LEVEL - II SIGN 签名 / DATE 日期 质量经理 / QCM <i>Lu...</i> 9/25/09				LEVEL-II SIGN / DATE 日期 用户 CUSTOMER			
签字 SIGN / 日期 DATE				签字 SIGN / 日期 DATE			

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000437**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0381**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: 30-Aug-2009**Description of Non-Conformance:**

The Quality Assurance Inspector (QA) observed the contractor performing heat straightening on 15mm material without the Engineer's approval. The procedure presented to the QA inspector on the shop floor (HSR1(B)-7358) indicated that the distortion was 5mm. The QA inspector measured the distortion at 24mm in 1000mm. The weld joint is identified as CB202E-014-001.

Contractor's proposal to correct the problem:

Perform required NDT.

Corrective action taken:

Contractor submitted HSR1 listed in NCR along with NDT reports verifying the welds remain in conformance with Contract specifications.

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