

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-000531

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 10-Dec-2009

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

NCR #: ZPMC-0504

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 5CW Side Plate T Stiffeners
Procedural	Procedural	Description:	

Reference Description: Segment 5CW Heat Straightening in wet conditions and not following the approved HSR

Description of Non-Conformance:

During a random visual inspection of Heat Straightening of Side Plate (SP147) T Stiffeners (RS37AD) located at panel point 37, the Quality Assurance (QA) Inspector discovered the following issues listed below:

- 1) ZPMC personnel deviated from the approved HSR(B)-338 Heat Straightening procedure by not utilizing the mechanical jacks the way it was detailed on the approved HSR. The jacks were placed from web to web between the T-Stiffeners, which are not allowed per this approved HSR.
- 2) Heat Straightening was performed on interior weld surfaces while rain water was flowing freely over the heated surface.

The T Stiffeners were located at 5CW to 6AW PP37 Counter Weight side, 3rd, 4th and 5th T Stiffeners (RS37AD) from the Bottom Plate.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

ZPMC Heat Straightening Procedure; HSR (B)-338

AWS D1.5 2002 Section 3.1.3; Welding shall not be done when the ambient temperature is lower than -20 degree C, when surfaces are wet or exposed to rain, snow, or high wind velocities, nor when the welders are exposed to inclement conditions.

Who discovered the problem: Joe Alaniz

Name of individual from Contractor notified: CK Chen

Time and method of notification: 1530 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1630 hours, Verbal

QC Inspector's Name: Wang Lu

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
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Reviewed By:	Wahbeh,Mazen	SMR
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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: 24-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: 05.03.06-000492

Subject: NCR No. ZPMC-0504

Reference Description: Segment 5CW Heat Straightening in wet conditions and not following the approved HSR

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:** 05

Remarks:

During a random visual inspection of Heat Straightening of Side Plate (SP147) T Stiffeners (RS37AD) located at panel point 37, the Quality Assurance (QA) Inspector discovered the following issues listed below:

- 1) ZPMC personnel deviated from the approved HSR(B)-338 Heat Straightening procedure by not utilizing the mechanical jacks the way it was detailed on the approved HSR. The jacks were placed from web to web between the T-Stiffeners, which are not allowed per this approved HSR.
- 2) Heat Straightening was performed on interior weld surfaces while rain water was flowing freely over the heated surface.

The T Stiffeners were located at 5CW to 6AW PP37 Counter Weight side, 3rd, 4th and 5th T Stiffeners (RS37AD) from the Bottom Plate.

Action Required and/or Action Taken:

Submit a repair plan to the engineer for approval that includes a determination of weld condition (due to quenching by rain water). A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0504

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: 05.03.06-000492

Subject: NCR No. ZPMC-0504

Dated: 09-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000609 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing NDT documentation of the welds in question to show that they are acceptable after deviation from the approved HSR. Based on this ZPMC requests closure of this NCR.

ZPMC is providing NDT documentation of the welds in question to show that they are acceptable after deviation from the approved HSR. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000609R00;

Caltrans' comments:

Status: CLO

Date: 18-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 18-Mar-2010

Attachment(s):



No. B-645

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-5

REGARDING: NCR-000531 (ZPMC-0504)

With this letter of response, ZPMC requests closure of CT NCR-000531 (ZPMC-0504) what mentioned about the incorrect heat straightening.

- ZPMC acknowledged this problem and has issued internal NCR.
- NDT was performed to warrant the affected welds' quality.
- Punch list item 343 what mentioned this NCR has been confirmed and closed by CT inspector.

Based on response above and attached documentations, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000531 (ZPMC-0504)

BCR-B-362(ZPMC-0504)

HSR(B)-338

B787-MT-19920

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

3/8/10

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
233 Burma Road
Oakland CA 94607
Tel. Fax.

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE BLDG. CO.
275 BURMA ROAD
OAKLAND CA 94607

Date: 24-Dec-2009

Contract No: 04-0120F4

04-SF-80-132-1110

Job Name: SAS Superstructure

Document No: 05.03.06-000492

Dear: Mr. Charles Kaupicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0504

Reference Description: Segment SCW Heat Straightening in wet conditions and not following the approved HSR

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: OBC

Remarks:

During a random visual inspection of Heat Straightening of Side Plate (SP14) T Stiffeners (RS37AD) located at panel point 37 the Quality Assurance (QA) Inspector discovered the following issues listed below:

- 1) ZPMC personnel deviated from the approved HSR (B-338) Heat Straightening procedure by not utilizing the mechanical jacks the way it was detailed on the approved HSR. The jacks were placed from web to web between the T-Stiffeners, which are not allowed per this approved HSR.
- 2) Heat Straightening was performed on interior weld surfaces where rain water was flowing freely over the heated surface.

The T Stiffeners were located at SCW to 6AW PP37 Counter Weight side, 3rd, 4th and 5th T Stiffeners (RS37AD) from the Bottom Plate

Action Required and/or Action Taken:

Submit a repair plan to the Engineer for approval that includes a determination of weld condition (due to quenching by rain water). A response for the resolution of this issue is expected within 7 days

Transmitted by: Bill Howe

Attachments: ZPMC-0504

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

05.03.06-000492 NCR

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
650 Walnut Ave. Ste. 151
Vallejo, CA 94592-1132
(707) 645-5453
(707) 649-5493

Contract #: 04-0120FH
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-000531

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 10-Dec-2009

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

NCR #: ZPMC-0504

Type of problem:

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

Bridge No: 34-0006

Component: Segment 5CW Side Plate T Stiffeners

Reference Description: Segment 5CW Heat Straightening in wet conditions and not following the approved HSR

Description of Non-Conformance:

During a random visual inspection of Heat Straightening of Side Plate (SP147) T Stiffeners (RS37AD) located at panel point 37, the Quality Assurance (QA) Inspector discovered the following issues listed below:

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The T Stiffeners were located at 5CW to 6AW PP37 Counter Weight side, 3rd, 4th and 5th T Stiffeners (RS37AD) from the Bottom Plate.



QUALITY ASSURANCE - NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

ZPMC Heat Straightening Procedure: HSR (B)-338

AWS D1.5 2002 Section 3.1.3: Welding shall not be done when the ambient temperature is lower than -20 degree C, when surfaces are wet or exposed to rain, snow, or high wind velocities, nor when the welders are exposed to inclement conditions

Who discovered the problem: Joe Alaniz

Name of individual from Contractor notified: CK Chen

Time and method of notification: 1530 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1630 hours, Verbal

QC Inspector's Name: Wang Lu

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 Wabbeh, (86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon, Albert

Reviewed By: Wabbeh, Mazen

Lead Reviewer/Task Leader

SMR

Prevention of Re-occurrence:

预防措施:

加强现场监控和检查。

Enhance supervision and inspection.

Approved by/批准: Gao Jun 07/01/07

Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据:

附件

无附件

对永久成型焊缝进行NDT检测, 并增加冷却柱4. 的所有措施.

Check NDT inspection to the weld where heat straightening is performed.

Protection ^{step} should be done to the heated surface afterwards.

Reviewed /批准: Tang Yongbo

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Jin Yong Jian

07120671

25th-3.6

Verified by QCI/质检确认:

Reviewed by QCA/质检主任审核:

#R787-QCP-1300



火工校正报告

Heat Straightening Report(HSR)

报告号 Report#

HSR(B)-338

版本号 Revision #

0

日期 Date

2009.12.06

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:

Xu Jun 2009.12.06

梁段 Gird:

5CW SP147A 杆 35-36

质检经理/Quality Assurance Manager-Approval

塔段 Tower:

N/A

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

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(Defect Removal Method): Using hand torch and additional force (Jack) as well 使用火焰枪以及外力(千斤顶)进行校火

后续NDE(Post-Removal NDE):

Jacking shall not be used to plastically deform the edge plate. The jack shall only be used as a fixture. After finishing the heat straightening operation, VT, MT and UT shall be performed on the entire length of the weld between the SPCM floor beam and edge plate stiffener. 不能使用千斤顶进行塑性变形, 千斤顶只能用作固定装置, 校火后需按照图纸上的要求对SPCM隔板与翼缘板之间焊缝进行VT, MT和UT检测。

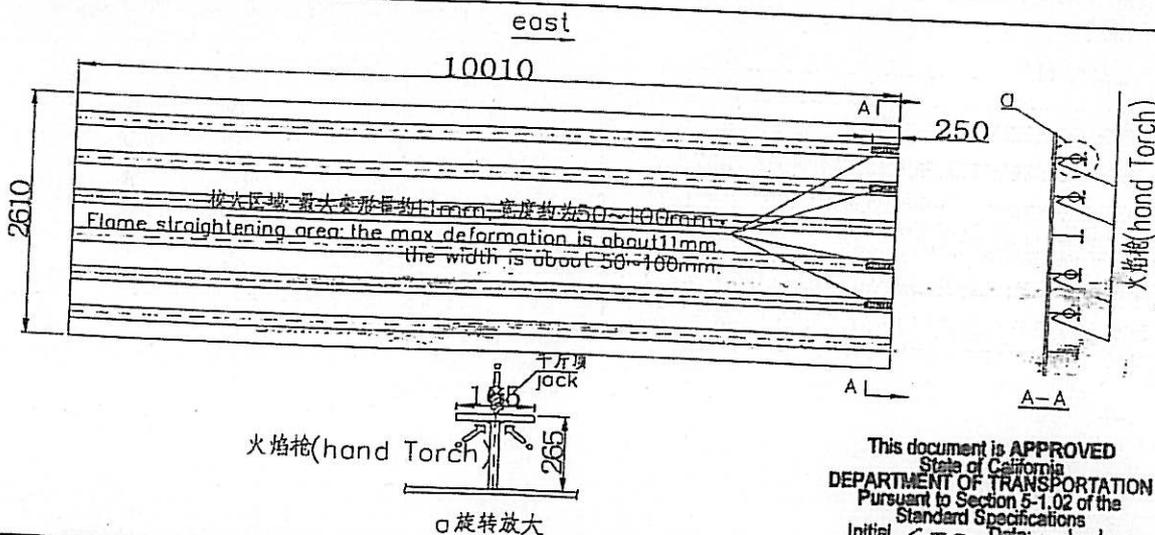
纠正措施(Corrective Action(s)):

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



This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SJE Date: 12/7/09

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	审核日期 Review Date:	
质检经理 QC Manager			

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

#R787-QCP-1100

NCR-B-362



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-19920 DATE日期 2010.03.07 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: OBW5 CALTRANS CONTRACT NO.: 04-0120F4
 5CW SIDE PLATE T-STEEL 加州工程编号

REFERENCING CODE 参考规范编码: AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002 PROCEDURE NO. 程序编号: ZPQC-MT-01 CALIBRATION DUE DATE 仪器校正有效期: Dec. 28ST, 2010

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: WELDING 焊接件 Material & thickness 母材, 厚度: A709M-345
 CASTING 铸件 18/10mm
 FORGING 锻造

WELDING PROCESS 焊接方法: FCAW TYPE OF JOINT 焊缝类型: T- JOINT

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			
SP147-001-027				ACC.		100%MT
SP147-001-028				ACC.		100%MT
SP147-001-029				ACC.		100%MT
SP147-001-030				ACC.		100%MT
SP147-001-031				ACC.		100%MT
SP147-001-032				ACC.		100%MT

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EXAMINED BY 主探: Dmy A cheng 2010.03.07 REVIEWED BY 审核: SU Wei 2010.03.07
 LEVEL - I SIGN 签名 / DATE 日期 LEVEL-II SIGN / DATE 日期
 质量经理 / QCM 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-000546**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 17-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0504**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: 10-Dec-2009**Description of Non-Conformance:**

During a random visual inspection of Heat Straightening of Side Plate (SP147) T Stiffeners (RS37AD) located at panel point 37, the Quality Assurance (QA) Inspector discovered the following issues listed below:

1) ZPMC personnel deviated from the approved HSR(B)-338 Heat Straightening procedure by not utilizing the mechanical jacks the way it was detailed on the approved HSR. The jacks were placed from web to web between the T-Stiffeners, which are not allowed per this approved HSR.

2) Heat Straightening was performed on interior weld surfaces while rain water was flowing freely over the heated surface.

The T Stiffeners were located at 5CW to 6AW PP37 Counter Weight side, 3rd, 4th and 5th T Stiffeners (RS37AD) from the Bottom Plate.

Contractor's proposal to correct the problem:

Perform NDT required to verify the quality of the welds affected by Heat Straightening.

Corrective action taken:

Contractor submitted NDT documentation verifying the affected welds are 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 152. 1675.3703, 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