

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-000764**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0726**Type of problem:**

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

Bridge No: 34-0006**Component:** OBG Segment 7BW FL3 Bottom Panel Stiffeners

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.

-ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.

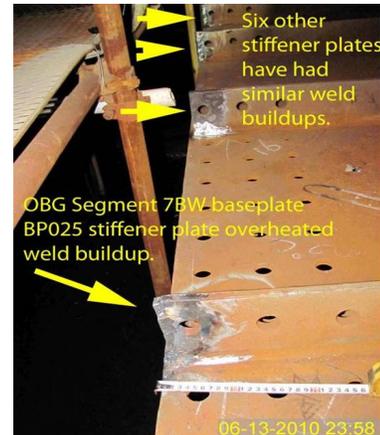
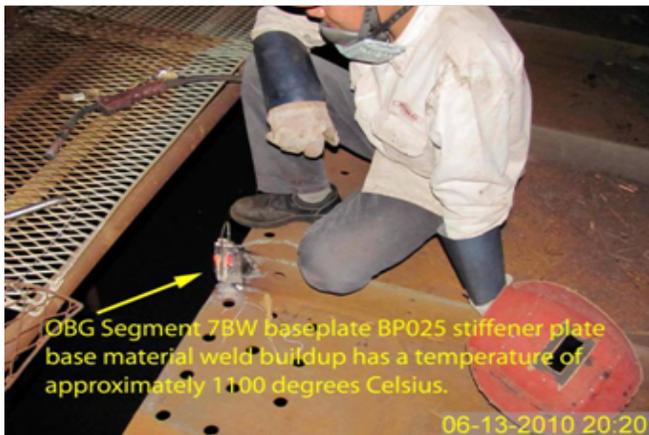
-The welder used two ceramic backing bars, one on each side of the stiffener.

-Multiple weld passes were deposited in the vertical position.

-This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.

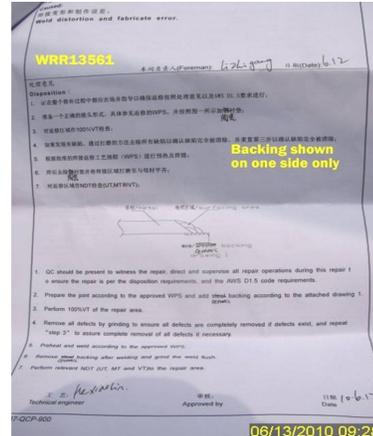
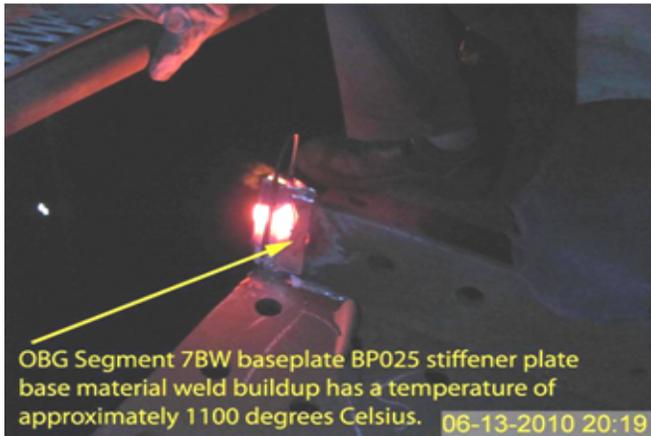
-This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).

-OBG segment 7BW is located in the yard behind OBG Bay 14.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

ZPMC WRR-13561: Specifies the use of backing on one side of the stiffener only.

ZPMC WPS WPS-345-FCAW-3G(3F)-Repair: The maximum interpass temperature is 230 degrees Celsius.

Who discovered the problem: Paul Dawson

Name of individual from Contractor notified: CK Chan

Time and method of notification: 1030 hours, 06-14-2010, Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300 hours, 06-14-2010, Verbal

QC Inspector's Name: Zhu Zhong Hai

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric	SMR
Reviewed By: Devey, Jim	SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 14-Jun-2010

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: 05.03.06-000722

Subject: NCR No. ZPMC-0726

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

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:** 07

Remarks:

- Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.
- ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.
 - The welder used two ceramic backing bars, one on each side of the stiffener.
 - Multiple weld passes were deposited in the vertical position.
 - This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.
 - This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).
 - OBG segment 7BW is located in the yard behind OBG Bay 14.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0726

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000722

Subject: NCR No. ZPMC-0726

Dated: 07-Jul-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000722 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the revised weld report and NDT records to show the built up areas are acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has written an internal NCR to document and reprimand the personnel involved in this oversight. ZPMC QA will continue to reinforce the requirement to have the correct weld repair report on hand and to follow the parameters on the report. ZPMC is providing the revised weld report and NDT records to show the built up areas are acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000722R00;

Caltrans' comments:

Status: REJ

Date: 18-Jul-2010

The additional weld metal added needs to be replaced as the material was superheated and ceramic backing was used to perform buttering.

Submitted by: Woo, Laraine

Date: 18-Jul-2010

Attachment(s):



No. B-814

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-07-07

REGARDING: NCR-000764(ZPMC-0726)

ZPMC QA personnel have written an internal NCR to address this issue. The unsatisfied welds have been removed and re-welded. ZPMC is providing the WRR and NDT records show the acceptance of these welds. ZPMC QA has instructed the QC/CWI to pay more attention to prevent the same issue from occurring again. Based on this, ZPMC is requesting this NCR to be closed.

ATTACHMENT:

N CR-000764(ZPMC-0726)

B-WR13561

B787-UT-13557

B787-UT-13558

B787-UT-13559

B787-MT-24272

B787-MT-24273

B787-MT-24274

[Handwritten signature]
7/7/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
 666 Fang Bin Road Room 708, Changxing Island
 Shanghai 201913 PR China
 Tel: 021-56858566 ext 207081 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGEFLUOR, A JV
 375 BURMA ROAD
 OAKLAND CA 95607

Date: 14-Jun-2010

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager
 Subject: NCR No. ZPMC-0726

Job Name: SAS Superstructure
 Document No: 05.03.06-000722

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

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: 07

Remarks:

- Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.
- ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.
- The welder used two ceramic backing bars, one on each side of the stiffener.
- Multiple weld passes were deposited in the vertical position.
- This QA measured the interpass temperature and observed the weld and adjacent base metal melted at 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.
- This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).
- OBG segment 7BW is located in the yard behind OBG Bay 14.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0726

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

05.03.06-000722,NCT

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-000764

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Jun-2010

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

NCR #: ZPMC-0726

Type of problem:

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

Bridge No: 34-0006

Component: OBG Segment 7BW FL3 Bottom Panel Stiffeners

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.

-ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.

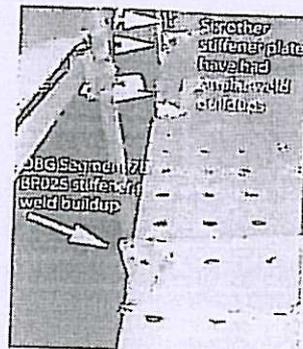
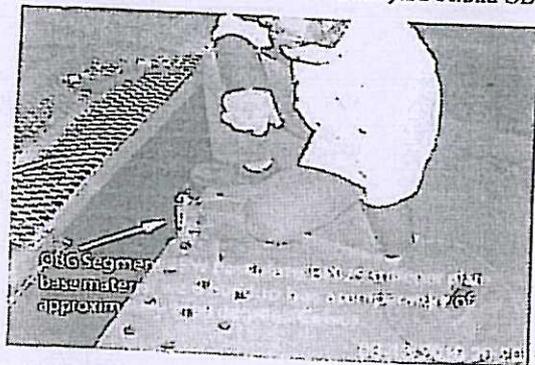
-The welder used two ceramic backing bars, one on each side of the stiffener.

-Multiple weld passes were deposited in the vertical position.

-This QA measured the interpass temperature and observed the weld and adjacent base metal melted at 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.

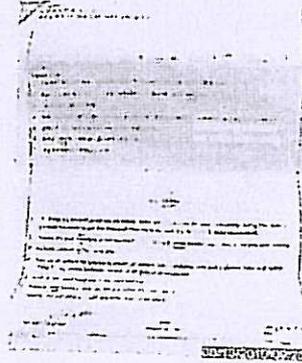
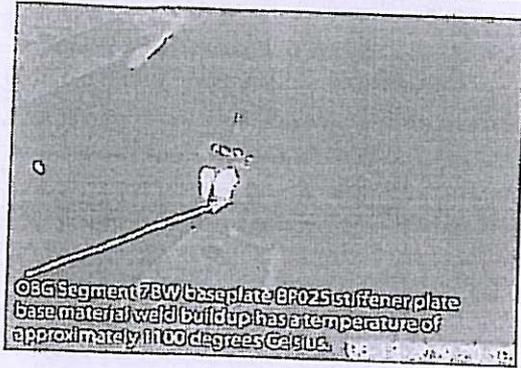
-This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).

-OBG segment 7BW is located in the yard behind OBG Bay 14.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

ZPMC WRR-13561: Specifies the use of backing on one side of the stiffener only.

ZPMC WPS WPS-345-FCAW-3G(3F)-Repair: The maximum interpass temperature is 230 degrees Celsius.

Who discovered the problem: Paul Dawson

Name of individual from Contractor notified: CK Chan

Time and method of notification: 1030 hours, 06-14-2010, Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300 hours, 06-14-2010, Verbal

QC Inspector's Name: Zhu Zhong Hai

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

PP50

7BW
联系梁端口

PP56

7DW
联系梁端口

面 筋板

筋板

PP56

7DE
联系梁端口

产生原因:

Caused:

焊接变形和制作误差。

Weld distortion and fabricate error.

车间负责人(Foreman):

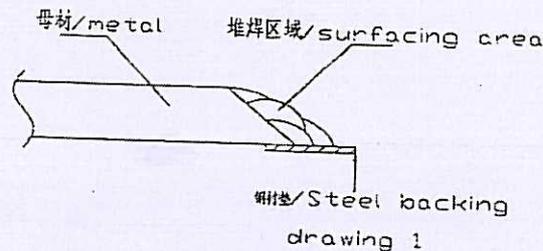
Li Zhigang

日期(Date): 6.12

处理意见

Disposition:

1. QC在整个修补过程中都应在场并指导以确保返修按照处理意见以及AWS D1.5要求进行;
2. 准备一个正确的接头形式,具体参见返修的WPS。并按照图一所示加钢衬垫;
3. 对返修区域作100%VT检查;
4. 如果发现缺陷,通过打磨的方法去除所有缺陷以确认缺陷完全被清除,并重复第三步以确认缺陷完全被清除;
5. 根据批准的焊接返修工艺规程(WPS)进行预热及焊接;
6. 焊后去除钢衬垫并将焊接区域打磨至与母材平齐;
7. 对返修区域作NDT检查(UT,MT和VT);



1. QC should be present to witness the repair, direct and supervise all repair operations during this repair to ensure the repair is per the disposition requirements, and the AWS D1.5 code requirements.
2. Prepare the joint according to the approved WPS and add steel backing according to the attached drawing 1.
3. Perform 100%VT of the repair area.
4. Remove all defects by grinding to ensure all defects are completely removed if defects exist, and repeat "step 3" to assure complete removal of all defects if necessary.
5. Preheat and weld according to the approved WPS.
6. Remove steel backing after welding and grind the weld flush.
7. Perform relevant NDT (UT, MT and VT) to the repair area.

工艺: Hexiaolin
Technical engineer

审核:
Approved by

日期 10.6.12
Date

#R787-QCP-900



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG35 SEG40 SEG39	报告编号 Report No.	B-WR13561
合同号 Contract No.:	04-0120F4	部件名称 Items Name	筋板 Stiffener	NDT报告编号 Report No. of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

加强制作过程中的监控, 减少误差。

Enhance supervision in process of fabrication to reduce error.

车间负责人(Foreman): *Li Zhigang* 日期(Date): 6.12

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1	工艺员 technologist	<i>flexion lin</i> 6.12
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>孔位距偏小</i>
焊前处理检查 Inspection before welding	<i>ACC</i>	焊前预热温度 Preheat temperature before welding	<i>167°C</i>
最大碳刨深度 Max. depth of gouging	<i>NA</i>	碳刨总长 Total length of gouging	<i>NA</i>
焊工 welder <i>2206/22067</i>	焊接类型 welding type <i>FCAW</i>	焊接位置 position <i>1G</i>	
焊接电流 Current <i>300/301</i>	焊接电压 Voltage <i>30/29.5</i>	焊接速度 Speed <i>297/300</i>	
返修后检查 Inspection After repairing:			
外观检查 VT result <i>ACC</i>	检验员 Inspector <i>Li yun</i>	日期 Date <i>6.6.20</i>	
NDT复检 NDT result <i>MTACC</i>	探伤员 NDT person <i>Li Zhigang</i>	日期 Date <i>20/06.25</i>	
见证: Witness/Review: <i>Li Yun</i>	<i>Tang Xingshan</i>	<i>2007.07.03</i>	
备注: Remark:			

#R787-QCP-900



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13557 DATE 2010.06.24 PAGE 1 OF 2 Revision No: 0

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

ITEMS NAME: STIFFENER DRAWING NO.: 7BW 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
 NA NA Dec: 28ST, 2010

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 IIV BLOCK TYPE II C.M.C A709M-345T2-X 14mm

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			Sound Path 声程
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%
7BW		0					20								ACC.	100%

EXAMINED BY 主探 *Zhang Yanyan* REVIEWED BY 审核 *Xu Yongguo* 2010.7.3

LEVEL - II SIGN / DATE *he 7.7* LEVEL - II SIGN / DATE

质量经理 / QCM 用户CUSTOMER

签字 SIGN / 日期 DATE 签字 SIGN / 日期 DATE



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13557 DATE 2010.06.24 PAGE 2 OF 2 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
7BW		0				20								ACC.	100%
7BW		0				20								ACC.	100%
7BW		0				20								ACC.	100%
7BW		0				20								ACC.	100%
7BW		0				20								ACC.	100%
7BW		0				20								ACC.	100%

BASE METAL PER B-WR13561

BLANK

EXAMINED BY 主探 <i>Tang Xing</i>	REVIEWED BY 审核 <i>Xu Yonggang 2010.7.3</i>
LEVEL - II SIGN / DATE <i>07.3</i>	LEVEL - II SIGN / DATE
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	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-24273

DATE日期 2010.06.28

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:

7DW

STIFFENER

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. 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 CASTING 铸件 FORGING 锻造

Material & thickness

母材,厚度

A709M-345T2-X

14/24/23/25/20mm

WELDING PROCESS

焊接方法

SMAW

TYPE OF JOINT

焊缝类型

NA

WELD I.D.
焊缝编号

DISCONTINUITY不连续性

INDICATION
指示TYPE
类型LENGTH IN mm
长度ACCEPT
接受REJECT
拒收REMARKS
备注

7DW

ACC.

100%MT

Base metal per B-WR13561

BLANK

EXAMINED BY主操

Wang Wei

Wang Wei

2010.06.28

LEVEL - II SIGN 签名 / DATE日期

质量经理 / QCM

REVIEWED BY审核

Zhang Qiang

LEVEL-II SIGN / DATE日期

用户CUSTOMER

签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

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-24272

DATE日期 2010.06.28

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:

7BW

STIFFENER

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. 28th, 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

CASTING 铸件

FORGING 锻造

Material & thickness

母材, 厚度

A709M-345T2-X

14/24/17/16/15/13mm

WELDING PROCESS

焊接方法

SMAW

TYPE OF JOINT

焊缝类型

NA

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			
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT
7BW				ACC.		100%MT

Base metal per B-WR13561

EXAMINED BY 主探
Wang Wei *Wang Wei*
LEVEL - II SIGN 签名 / DATE日期 2010.06.28
质量经理 / QCM

REVIEWED BY 审核
Tu Shiqian
LEVEL-II SIGN / DATE日期 2010.06.28
用户CUSTOMER

签字 SIGN / 日期 DATE
(FORM# ZPQC-MT01)

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-24274

DATE日期 2010.06.28

PAGE OF页码 1/1

Revision No: 0

PROJECT NO.

ZP06-787

CONTRACTOR:

CALTRANS

工程编号:

用户:

DRAWING NO.

7EW

CALTRANS CONTRACT NO.:

04-0120F4

图号:

STIFFENER

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

CASTING 铸件

FORGING 锻造

Material & thickness

母材,厚度

A709M-345T2-X

14/24/23mm

WELDING PROCESS

焊接方法

SMAW

TYPE OF JOINT

焊缝类型

NA

WELD I.D.
焊缝编号

DISCONTINUITY不连续性

INDICATION
指示

TYPE
类型

LENGTH IN mm
长度

ACCEPT
接受

REJECT
拒收

REMARKS
备注

7EW

ACC.

100%MT

7EW

ACC.

100%MT

7EW

ACC.

100%MT

Base metal per B-WR13561

BLANK

EXAMINED BY主探

Wang Wei

Wang Wei

LEVEL - II SIGN 签名 / DATE日期

2010.06.28

质量经理 / QCM

REVIEWED BY 审核

LEVEL-II SIGN / DATE日期

2010.06.28

用户CUSTOMER

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000722

Subject: NCR No. ZPMC-0726

Dated: 05-Aug-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000722 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: The weld build up area was removed and re-welded per the approved weld build up procedure. Records of repair have been previously submitted.

ZPMC has removed the material where weld build up was previously performed incorrectly. The weld build up area was removed and re-welded per the approved weld build up procedure. Records of repair have been previously submitted. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000722R01;

Caltrans' comments:

Status: AAP

Date: 16-Aug-2010

The proposed resolution is acceptable. However, please specify on the NDT reports which member was tested rather than the segment the member is in.

Submitted by: Woo, Laraine

Attachment(s):

Date: 16-Aug-2010



No. B-834

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-08-02

REGARDING: NCR-000764(ZPMC-0726)

The affected superheated material has already been replaced and the sequent repair was performed following the welding repair report attached in the previously submitted response. Based on this, please consider closure of this NCR.

ATTACHMENT:

NCR-000764(ZPMC-0726)

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

8/3/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607
Date: 14-Jun-2010
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: 05.03.06-000722
Subject: NCR No. ZPMC-0726
Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

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: 07

Remarks:

- Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.
- ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.
 - The welder used two ceramic backing bars, one on each side of the stiffener.
 - Multiple weld passes were deposited in the vertical position.
 - This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.
 - This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).
 - OBG segment 7BW is located in the yard behind OBG Bay 14.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer
Attachments: ZPMC-0726

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, Bill Casey
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-000764

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Jun-2010

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

NCR #: ZPMC-0726

Type of problem:

Welding **Concrete** **Other**

Welding **Curing** **Procedural**

Joint fit-up **Coating** **Other**

Procedural **Procedural** **Description:**

Bridge No: 34-0006

Component: OBG Segment 7BW FL3 Bottom Panel Stiffeners

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.

-ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.

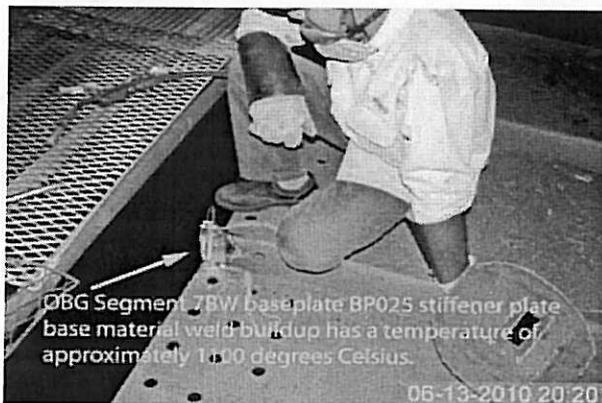
-The welder used two ceramic backing bars, one on each side of the stiffener.

-Multiple weld passes were deposited in the vertical position.

-This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.

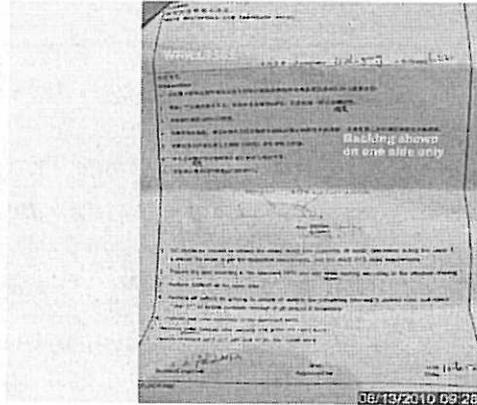
-This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).

-OBG segment 7BW is located in the yard behind OBG Bay 14.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

ZPMC WRR-13561: Specifies the use of backing on one side of the stiffener only.

ZPMC WPS WPS-345-FCAW-3G(3F)-Repair: The maximum interpass temperature is 230 degrees Celsius.

Who discovered the problem: Paul Dawson

Name of individual from Contractor notified: CK Chan

Time and method of notification: 1030 hours, 06-14-2010, Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300 hours, 06-14-2010, Verbal

QC Inspector's Name: Zhu Zhong Hai

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000722

Subject: NCR No. ZPMC-0726

Dated: 27-Aug-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000722 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: Per the Department's comments, ZPMC has revised the NDT reports to show the members tested and those members are acceptable.

Per the Department's comments, ZPMC has revised the NDT reports to show the members tested and those members are acceptable. Based on these revisions and previously submitted documents and responses. ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000722R02;

Caltrans' comments:

Status: CLO
Date: 31-Aug-2010

The submitted documentation is sufficient to close this NCR.

Submitted by: Woo, Laraine

Attachment(s):

Date: 31-Aug-2010



No. B-851

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-08-27

REGARDING: NCR-000764(ZPMC-0726)

ZPMC is providing the revised NDT records show the tested member are acceptable. And based on the previously submitted response, ZPMC is requesting closure of this NCR.

ATTACHMENT:

N CR-000764(ZPMC-0726)

B787-UT-13557 R1

B787-UT-13558 R1

B787-UT-13559 R1

B787-MT-24272 R1

B787-MT-24273 R1

B787-MT-24274 R1

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

8/27/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 14-Jun-2010

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: 05.03.06-000722

Subject: NCR No. ZPMC-0726

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

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: 07

Remarks:

- Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.
- ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.
 - The welder used two ceramic backing bars, one on each side of the stiffener.
 - Multiple weld passes were deposited in the vertical position.
 - This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.
 - This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).
 - OBG segment 7BW is located in the yard behind OBG Bay 14.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer
Attachments: ZPMC-0726

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao, Bill Casey
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-000764

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 13-Jun-2010

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

NCR #: ZPMC-0726

Type of problem:

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

Bridge No: 34-0006

Component: OBG Segment 7BW FL3 Bottom Panel Stiffeners

Reference Description: ZPMC performed welding without conforming to the approved WPS and ZPMC's Welding Repair Report

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.

-ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.

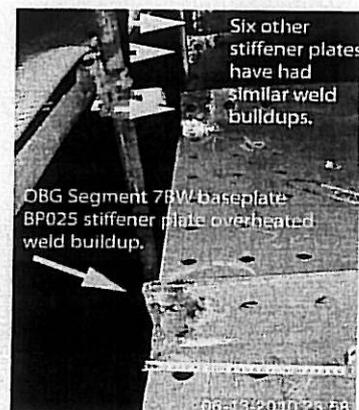
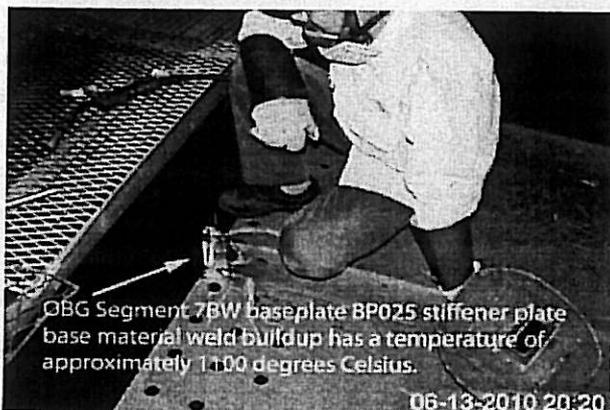
-The welder used two ceramic backing bars, one on each side of the stiffener.

-Multiple weld passes were deposited in the vertical position.

-This QA measured the interpass temperature and observed the weld and adjacent base metal melted an 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.

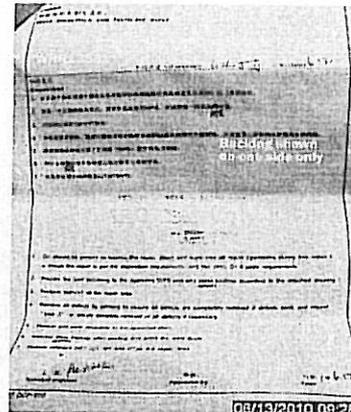
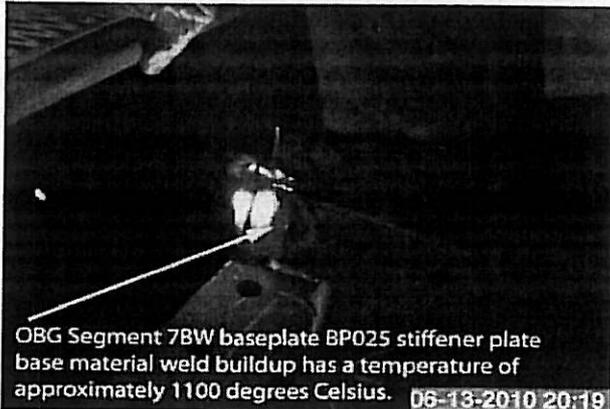
-This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).

-OBG segment 7BW is located in the yard behind OBG Bay 14.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

ZPMC WRR-13561: Specifies the use of backing on one side of the stiffener only.

ZPMC WPS WPS-345-FCAW-3G(3F)-Repair: The maximum interpass temperature is 230 degrees Celsius.

Who discovered the problem: Paul Dawson

Name of individual from Contractor notified: CK Chan

Time and method of notification: 1030 hours, 06-14-2010, Email

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300 hours, 06-14-2010, Verbal

QC Inspector's Name: Zhu Zhong Hai

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR



REPORT OF MAGNETIC PARTICLE EXAMINATION
磁粉检测报告

REPORT NO. 报告编号 B787-MT-24272R1 DATE日期 2010.08.27 PAGE OF页码 1/2 Revision No: 0

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

DRAWING NO. 7BW CALTRANS CONTRACT NO.:
图号: STIFFENER 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 , 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	<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-345T2-X 14/24/17/16/15/13mm
---------------------------------	---	-------------------------------	--

WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	NA
-------------------------	------	-----------------------	----

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			
X8K				ACC.		100%MT
X8L				ACC.		100%MT
X8C				ACC.		100%MT
X82D				ACC.		100%MT
X82E				ACC.		100%MT
X82F				ACC.		100%MT
X82G				ACC.		100%MT
X82H				ACC.		100%MT
X82J				ACC.		100%MT
X82K				ACC.		100%MT
X82D				ACC.		100%MT
X115A				ACC.		100%MT
X115A				ACC.		100%MT
X115A				ACC.		100%MT
X8K				ACC.		100%MT

EXAMINED BY主探 Wang Wei Wang Wei 2010.08.27	REVIEWED BY审核 Lalimig Lalimig 2010.08.27
LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM	LEVEL-II SIGN / DATE日期 用户CUSTOMER
签字 SIGN / 日期 DATE	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-24272R1 DATE日期 2010.08.27 PAGE OF 页码 2/2 Revision No: 0

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

DRAWING NO. 7BW CALTRANS CONTRACT NO.:
图号: STIFFENER 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 , 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	<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-345T2-X 14/24/17/16/15/13mm
---------------------------------	---	--------------------------------	--

WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	NA
-------------------------	------	-----------------------	----

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			
X8L				ACC.		100%MT
X82C				ACC.		100%MT
X8C				ACC.		100%MT
X8B				ACC.		100%MT
X82H				ACC.		100%MT
X82J				ACC.		100%MT
X82K				ACC.		100%MT
X8G				ACC.		100%MT
X82A				ACC.		100%MT
X82E				ACC.		100%MT
X115A				ACC.		100%MT
X115B				ACC.		100%MT
X115B				ACC.		100%MT
X115C				ACC.		100%MT

Base metal per B-WR13561

EXAMINED BY 主探 Wang Wei Wang Wei 2010.08.27	REVIEWED BY 审核 Li Liming Li Liming 2010.08.27
LEVEL - II 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



REPORT OF MAGNETIC PARTICLE EXAMINATION
磁粉检测报告

REPORT NO. 报告编号 B787-MT-24274R1 DATE日期 2010.08.27 PAGE OF 页码 1/1 Revision No: 0

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

DRAWING NO. 7DW CALTRANS CONTRACT NO.:
图号: STIFFENER 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 , 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	<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-345T2-X 14/24/23mm
---------------------------------	---	--------------------------------	-----------------------------

WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	NA
-------------------------	------	-----------------------	----

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			
X8E				ACC.		100%MT
X82D				ACC.		100%MT
X82F				ACC.		100%MT

Base metal per B-WR13561

BLANK

EXAMINED BY 主探 Wang Wei (Wang Wei) 2010.08.27 LEVEL - II SIGN 签名 / DATE 日期 质量经理 / QCM	REVIEWED BY 审核 Liliming 2010.08.27 LEVEL-II SIGN / DATE 日期 用户 CUSTOMER
签字 SIGN / 日期 DATE	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-24273R1 DATE日期 2010.08.27 PAGE OF页码 1/1 Revision No: 0

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

DRAWING NO. 7DW CALTRANS CONTRACT NO.:
图号: STIFFENER 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 , 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	<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-345T2-X 14/24/23/25/20mm
---------------------------------	---	--------------------------------	---------------------------------------

WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	NA
-------------------------	------	-----------------------	----

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			
X8F				ACC.		100%MT
X82A				ACC.		100%MT
X8K				ACC.		100%MT
X8E				ACC.		100%MT
X8G				ACC.		100%MT
X82A				ACC.		100%MT
X115B				ACC.		100%MT
X115B				ACC.		100%MT
X115A				ACC.		100%MT
X115A				ACC.		100%MT

Base metal per B-WR13561

BLANK

EXAMINED BY主探
_Wang Wei Wang Wei 2010.08.27
LEVEL - II SIGN 签名 / DATE日期
质量经理 / QCM

签字 SIGN / 日期 DATE

REVIEWED BY 审核
Li Liming 2010.08.27
LEVEL-II SIGN / DATE日期
用户CUSTOMER

签字 SIGN / 日期 DATE



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13559R1 DATE 2010.08.27 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME:

STIFFENER

DRAWING NO.:

7DE

CALTRANS CONTRACT NO.: 04-0120F4

部件名称

图号

加州工程编号

REFERENCING CODE 参考规范

AWS D1.5-2002

ACCEPTANCE STANDARD 接受标准

AWS D1.5-2002(Table 6.3)

PROCEDURE NO. 程序编号

ZPQC-UT-01

WELDING PROCESS 焊接方法

NA

JOINT TYPE 焊缝类型

NA

CALIBRATION DUE DATE 仪器校正有效期

Dec. 28ST, 2010

EQUIPMENT 设备

UT SCOPE

MANUFACTURER 制造商

PANAMETRICS

MODEL NO. 样式编号

EPOCH-4B

SERIAL NO. 序列编号

071565311, 061488510,
061495811, 070152011,

CALIBRATION BLOCK 试块

AWS IIW BLOCK TYPE II

COUPLANT 耦合剂

C.M.C

MATERIAL/THICKNESS 材料厚度

A709M-345T2-X 14mm

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			Sound Path 声程
X8E		70				34									ACC.	100%
X82D		70				34									ACC.	100%
X82F		70				34									ACC.	100%

BASE METAL PER B-WR13561

BLANK

EXAMINED BY 主探

Tang Shugsham 2010.08.27

REVIEWED BY 审核

Li Liming 2010.8.27

LEVEL - II SIGN / DATE

LEVEL - II SIGN / DATE

质量经理 / QCM

用户CUSTOMER

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13557R1 DATE 2010.08.27 PAGE 1 OF 2 Revision No: 0

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

ITEMS NAME: STIFFENER 部件名称	DRAWING NO.: 7BW 图号	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号
----------------------------------	---------------------------	--

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

WELDING PROCESS 焊接方法 NA	JOINT TYPE 焊缝类型 NA	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010
----------------------------	-----------------------	--

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

CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 14mm
---	-----------------------	--

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			Sound Path 声程
X8K		0				20									ACC.	100%
X8L		0				20									ACC.	100%
X8C		0				20									ACC.	100%
X82D		0				20									ACC.	100%
X82E		0				20									ACC.	100%
X82F		0				20									ACC.	100%
X82G		0				20									ACC.	100%
X82H		0				20									ACC.	100%

EXAMINED BY 主探 <i>Tongxingshan . 2010.08.27</i>	REVIEWED BY 审核 <i>Liliming 2010.08.27</i>
--	--

LEVEL - II SIGN / DATE	LEVEL - II SIGN / DATE
------------------------	------------------------

质量经理 / QCM	用户 CUSTOMER
------------	-------------

签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE
-------------------	-------------------



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13557R1 DATE 2010.08.27 PAGE 2 OF 2 Revision No: 0

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			Sound Path 声程
X82J		0				20									ACC.	100%
X82K		0				20									ACC.	100%
X82D		0				20									ACC.	100%
X115A		0				20									ACC.	100%
X115A		0				20									ACC.	100%
X115A		0				20									ACC.	100%
X8K		0				20									ACC.	100%
X8L		0				20									ACC.	100%
X82C		0				20									ACC.	100%
X8C		0				20									ACC.	100%
X8B		0				20									ACC.	100%
X82H		0				20									ACC.	100%
X82J		0				20									ACC.	100%
X82K		0				20									ACC.	100%
X8G		0				20									ACC.	100%
X82A		0				20									ACC.	100%
X82E		0				20									ACC.	100%
X115A		0				20									ACC.	100%
X115B		0				20									ACC.	100%
X115B		0				20									ACC.	100%
X115C		0				20									ACC.	100%

BASE METAL PER B-WR13561

EXAMINED BY主探
Tang xing shan. 2010.08.27

REVIEWED BY审核
Lili ming 2010.08.27

LEVEL - II SIGN / DATE

LEVEL - II SIGN / DATE

质量经理 / QCM

用户CUSTOMER

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13558R1 DATE 2010.08.27 PAGE 1 OF 2 Revision No: 0

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

ITEMS NAME: 部件名称 STIFFENER	DRAWING NO.: 图号 7DW	CALTRANS CONTRACT NO.: 04-0120F4 加州工程编号
-------------------------------	------------------------	--

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

WELDING PROCESS 焊接方法 NA	JOINT TYPE 焊缝类型 NA	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010
----------------------------	-----------------------	--

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

CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T-X 14mm
---	-----------------------	---

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			Sound Path 声程
X8F		0				20									ACC.	100%
X82A		0				20									ACC.	100%
X8K		0				20									ACC.	100%
X8E		0				20									ACC.	100%
X8G		0				20									ACC.	100%
X82A		0				20									ACC.	100%
X115B		0				20									ACC.	100%
X115B		0				20									ACC.	100%

EXAMINED BY 主探 <i>Tangxingshan 2010.08.27</i>	REVIEWED BY 审核 <i>LiLiming 2010.08.27</i>
--	--

LEVEL - II SIGN / DATE	LEVEL - II SIGN / DATE
------------------------	------------------------

质量经理 / QCM	用户CUSTOMER
------------	------------

签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE
-------------------	-------------------



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13558R1 DATE 2010.08.27 PAGE 2 OF 2 Revision No: 0

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	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
X115A		0				20								ACC.	100%
X115A		0				20								ACC.	100%

BASE METAL PER B-WR13561

BLANK

EXAMINED BY 主探
Tangxingshan 2010.08.27

LEVEL - II SIGN / DATE

质量经理 / QCM

签字 SIGN / 日期 DATE

REVIEWED BY 审核
LiLiming 2010.08.27

LEVEL - II SIGN / DATE

用户 CUSTOMER

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-000744**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 01-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0726**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: 13-Jun-2010**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector discovered the following issues during random in-process visual inspection of OBG Segment 7BW adjacent to where Crossbeam 7 is to be attached.

-ZPMC personnel performed weld buildup (buttering) on the ends of the bottom panel stiffeners using weld repair document B-WR13561.

-The welder used two ceramic backing bars, one on each side of the stiffener.

-Multiple weld passes were deposited in the vertical position.

-This QA measured the interpass temperature and observed the weld and adjacent base metal melted at 1100°C Temp stick. Maximum interpass temperature allowed is 230°C.

-This QA noted that the bottom panel and fillet welds joining the stiffeners to the bottom panel are designated on the approved shop drawings as Seismic Performance Critical Material (SPCM).

-OBG segment 7BW is located in the yard behind OBG Bay 14.

Contractor's proposal to correct the problem:

Remove weld metal and replace in accordance with the approved welding repair procedure.

Corrective action taken:

Welds were removed and replaced. Contractor has submitted subsequent NDT documentation verifying welds are in conformance with Contract weld quality requirements. An internal NCR was also issued by the Contractor in regards to this issue.

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