

**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, China**Report No:** NCR-000062**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Jan-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0060**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Tower-114m Mockup
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b>	

**Description of Non-Conformance:**

ABF/ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ABF/ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

**Applicable reference:**

1) AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2"

2) AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

**Who discovered the problem:** Alfredo Acuna, Quality Assurance Inspector**Name of individual from Contractor notified:****Time and method of notification:****Name of Caltrans Engineer notified:** Ching Chao, Structures Construction Senior**Time and method of notification:** 01-30-2008, Verbal**QC Inspector's Name:** Xu Jun, ZPMC Quality Control Inspector**Was QC Inspector aware of the problem:** Yes No**Contractor's proposal to correct the problem:**

Unknown at this time.

**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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Inspected By:** Wahbeh,Mazen

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer



**DEPARTMENT OF TRANSPORTATION**  
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 Enterprises, a JV  
375 Burma Road  
Oakland CA 94607

**Date:** 15-Feb-2008

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

**Attention:** Dave Williams            Consultant

**Job Name:** SAS Superstructure

**Document No:** 05.03.06-000032

**Subject:** NCR No. ZPMC-0060

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

Non-Conformance with quality control procedures. Please take appropriate corrective action. Recurrence may require further administrative action.

Non-Conformance with quality control. Records indicate that this is a recurring issue and constitutes a systematic problem in quality control. Within fourteen (14) days, please submit a plan to correct the deficiency.

Material or workmanship is not in compliance with contract requirements.

**Enclosed please find the following items:**

**NCR No:** ZPMC-0060

**Remarks:**

Please see attachment for details.

**Transmitted by:** Ching Chao

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, Jason Tom, Dave Williams, Contract Files, Kannu Balan, Chin

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000032

**Subject:** NCR No. ZPMC-0060

**Dated:** 24-Apr-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000023 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC QC in the future will conduct UT according to the butt joint UT procedure

Please see the attached response from ZPMC. ABF JV has reviewed and concurs with this response and considers this issue resolved. ABF JV believes, based on our understanding of the NCT process that this NCR was issued closed as the top (first) box on the NCT was checked. Please confirm.

**Submitted by:** Kanapicki, Charles

**Attachment(s):** ABF-NPR-000023R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 25-Aug-2008

The Contractor's response is acceptable. The Department concurs that Non-Conformance ZPMC-0060 is closed.

**Submitted by:** Wright, Doug

**Attachment(s):**

**Date:** 25-Aug-2008

NCT 32'

TL-000802R1



PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 03/27/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: NCR(NCR-000062) FOR CLOSURE / ZPMC 60 <sup>OK</sup> AT 22f010

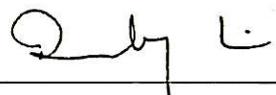
SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.CT-99R1 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER NCR-000062. / ZPMC 60 <sup>OK</sup> AT 22f010

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:



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PLAN HOLDER

3/27/08 <sup>1600</sup>

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DATE



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COMPANY

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PHONE NO.

PLAN NUMBER: N/A  
 #R787-QCP-102



No. CT-099R1

# LETTER OF RESPONSE

DATE: 2008.03.27

To: AB/F Steve Lawton

From: Li Liming

Subject: Response to CT NCR-000062 / ZPMC 60 <sup>(2/2)</sup> 4/22/08

Mr. Lawton:

ZPMC has generated internal NCR-CT-019 in Response to CT NCR-000062, regarding the incorrect procedure on the Skin A and B corner joint on the 114m Mockup, QC failed to check UT procedure prior to allowing the technician to proceed, the NDT technician shall check and differentiate the joint type (the butt joint or the corner joint), then adopt the right UT procedure to conduct the UT, ZPMC suggested to use it is hard to perform the UT under the condition now that all the exterior and internal splice plates have been fitted to the 114m mockup, there was no much room to perform the UT inside according to the butt joint UT procedure, ZPMC had performed the UT for the A/B corner and the weld was accepted after repairing following the corner joint UT procedure, as to the mockup, ZPMC has been aware of this issue and will conduct the UT according to the Butt joint UT procedure to the joint checked as Butt joint from now on.

/ ZPMC 60

CTL  
4/22/08

Attachment:

NCR-CT-019,CT-UT-088,CWR(CT)033,CT-UT-088R1,WR062,CT-UT-088R2,CT-UT-097,WR069,CT-UT-097R1.

If further information is needed, Please contact me.

Sincerely

Li Liming

*Li Liming*

2008.03.27

REVIEWED  
 A. Liming  
 ABF Qcm  
 10 APRIL 08



# 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-CT-019 R1
-------------------------------------------	---------------------------

ZPMC 60  
CUT  
4/22/08

Item: the problem of A/B corner UT testing procedure 名称描述: A/B 角探伤问题	Item Number: 件号: NA	Drawing: 图号:
-------------------------------------------------------------------------	---------------------	--------------

Location: 114M Mock Up 位置: 114 米段	Date: 2008-03-14 日期: 2008-03-14
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### Description of Nonconformance: 不符合项状态描述:

CT inspector found ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5(2002), section 6: "Testing Procedure", Subsection 6.19.6.1: "The testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5(2002), Section 6: "Testing Procedure", Table 6.2, "Testing Angle".

加州检验员发现 ZPMC 对 A/B 角的探伤使用了错误的方法。A/B 角的焊缝应当是对接焊缝，需用对接焊缝的检测方法对其进行探伤，而 ZPMC 采用了角焊缝的检测方法。

依据请参见:

AWS D1.5(2002), 第 6 章, 6.19.6.1

AWS D1.5(2002), 第 6 章, 表 6.2

Work By: 施工方: Li Liming 2008-3-14 Prepared by: 准备: Di Wang 2008-3-14 Reviewed by QCE: 质量工程师批准: Xu Jun 2008-3-14

Drawing Error     Material Defect     Fabrication Error     Other  
 图纸错误                      材料缺陷                      制作错误                      其他原因

Disposition:  Use as is     Repair     Reject  
 处理措施:                      回用                      返修                      拒收

### Recommendation:

建议:

ZPMC suggested to use it as is, because it is hard to perform the UT under the condition now that all the exterior and internal splice plates have been fitted to the 114M mock up. There was no much room to perform the UT inside according to the Butt joint UT procedure. ZPMC had performed UT for the A/B corner and the weld was accepted following the Corner joint UT procedure. As to the mock up, ZPMC has been aware of this issue and will conduct the UT according to the Butt joint UT procedure to the joint checked as Butt joint from now on.

ZPMC 建议回用此部件，因为根据现在的模型段状态已经很难再对 A/B 角进行 UT 重检，所有的内外连接板已经装配，另 ZPMC 也按照角接 UT 探伤方式对 A/B 进行了 UT 监测并验收合格。鉴于模型段，ZPMC 已经认识到此问题并且将会在以后的产品中按照对接焊缝的要求进行探伤。

Prepared by:  
准备

Li Liming  
2008.3.14

Approved by QCA:  
质量经理批准

Hu Gang . 2008.3.14

**Reason for Nonconformance:**

不符合原因:

QC failed to check UT procedure prior to allowing the technician to proceed.  
探伤人员没有采用正确的 UT 检验方式进行探伤。

**Prevention of Re-occurrence:**

预防措施:

- 1、The NDT technician shall check and differentiate the joint type (the Butt joint or the corner joint), then adopt the right UT procedure to conduct the UT.  
加强探伤人员对接头形式的检查和鉴别，以便实施正确的 UT 方法。

Approved by/批准:

Li Liming 2008.3.14

Technical Justification for Use-As-Is/Repair:  
回用或返修的技术依据:

Attachment

附件

Non-attachment

无附件

The final UT reports for the 114M lower section and upper section A/B corner.  
114 米段上下段 A/B 角焊缝最终 UT 报告。

Reviewed /批准:

Yan Kongla 08.3.14

Verification:

Acceptable

确认:

可接受

Unacceptable

不可接受

Verified by QCI/质检确认:

Reviewed by QCA/质检主任审核:

#R787-QCP-1300

**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, China

Report No: NCR-000062

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 30-Jan-2008

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

NCR #: ZPMC-0060

## Type of problem:

Welding  Concrete  Other Welding  Curing  Procedural  Bridge No: 34-0006Joint fit-up  Coating  Other  Component: Tower-114m MockupProcedural  Procedural  Description:

## Description of Non-Conformance:

ABF/ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ABF/ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

## Applicable reference:

1) AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2"

2) AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

Who discovered the problem: Alfredo Acuna, Quality Assurance Inspector

Name of individual from Contractor notified:

Time and method of notification:

Name of Caltrans Engineer notified: Ching Chao, Structures Construction Senior

Time and method of notification: 01-30-2008, Verbal

QC Inspector's Name: Xu Jun, ZPMC Quality Control Inspector

Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

Unknown at this time.

## 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, (818) 292-0659, who represents the Office of Structural Materials for your project.

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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Inspected By: Wahbeh, Mazen

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 CT-UT-088

DATE 2007.12.26

PAGE 1 OF 2

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: 114M BOX AB ANGLE  
部件名称DRAWING NO.: MUC-MA107 B/C  
图号CALTRANS CONTRACT NO.: 04-0120F4  
加州工程编号REFERENCING CODE 参考规范  
AWS D1.5-2002ACCEPTANCE STANDARD 接受标准  
AWS D1.5-2002(Table 6.3)PROCEDURE NO. 程序编号  
ZPQC-UT-01WELDING PROCESS 焊接方法  
FCAWJOINT TYPE 焊缝类型  
CORNER JOINTCALIBRATION DUE DATE 仪器校正有效期  
Jan. 1<sup>ST</sup>, 2008EQUIPMENT 设备  
UT SCOPEMANUFACTURER 制造商  
PANAMETRICSMODEL NO. 样式编号  
EPOCH-4BSERIAL NO. 序列编号  
051392712,061488510CALIBRATION BLOCK 试块  
AWS IIW BLOCK TYPE IICOUPLANT 耦合剂  
C.M.CMATERIAL/THICKNESS 材料厚度  
A709-50T-2 / 90/60 mm

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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	Noise 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		
MUC-MA107B/C-4A/4B	1	69.7	A	1	39	35	3	1	14	58	20	0	0	REI.	
	2	69.7	A	1	42	35	3	4	45	113	40	-20	125	REI.	
	3	69.7	A	1	42	35	4	3	15	113	40	-20	590	REI.	
	4	69.7	A	1	42	35	4	3	15	76	26	-20	675	REI.	
	5	69.7	A	1	42	35	6	1	15	112	39	-20	1235	REI.	
	6	69.7	A	1	42	35	6	1	80	112	39	-20	1310	REI.	
	7	69.7	A	1	42	35	6	1	10	112	39	-20	1500	REI.	

EXAMINED BY 主探

REVIEWED BY 审核:

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





# 关键焊缝返修报告

## Critical Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	MUC-MA107 MUC-MA102	报告编号 Report No.	CWR(CT)033
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M LOWER BOX ANGLE AB	NDT报告编号 Report No.of NDT	CT-UT-088
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

Rejectable indication found by ultrasonic inspection exceeds 10% of the weld size.  
(缺陷焊缝长度超过检测长度的10%。)

MUC-MA107B/C-4A、4B

检验员 (Inspector):

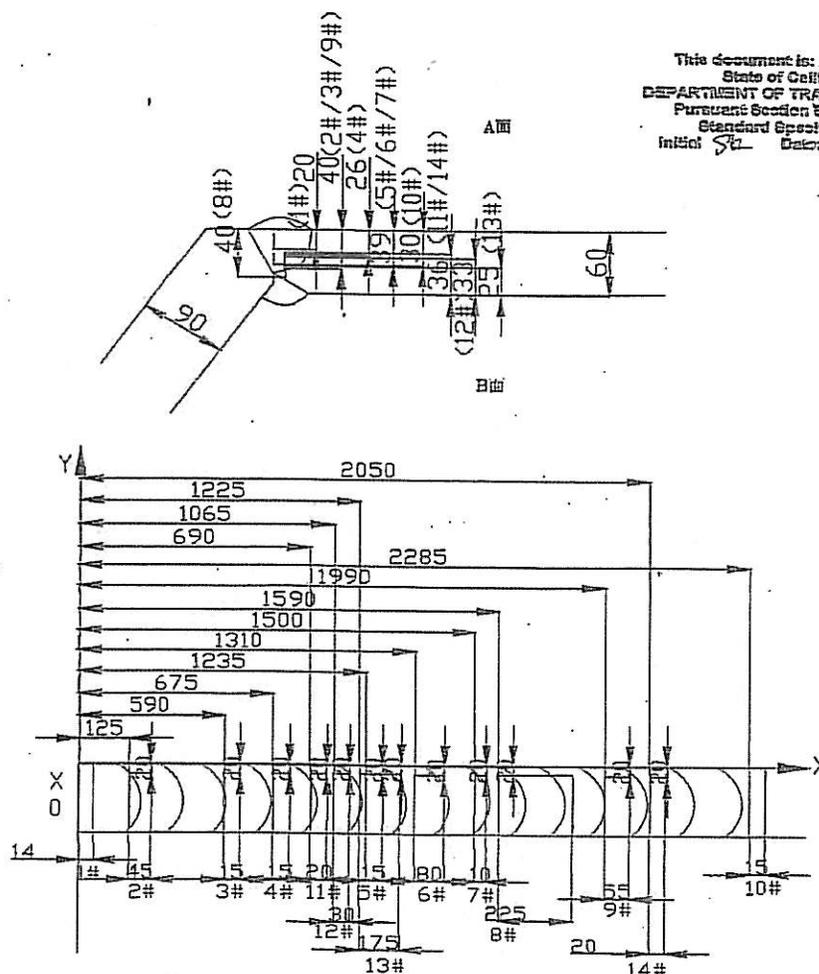
Li Liming

日期(Date):

07.12.26

焊缝返修位置示意图:

Draft of welding discontinuity:



This document is: APPROVED  
State of California  
DEPARTMENT OF TRANSPORTATION  
Pursuant Section 5-1.22 of the  
Standard Specifications  
Initial: SL Date: 1/4/08

WELD NUMBER: MUC-MA107B/C-4A/4B

产生原因:

Caused:

- 1. 焊工未严格执行WPS相应的规程。
- 2. 焊道没清理干净。
- 1. Welder didn't strictly inform relative WPS specification.
- 2. Did not clear the weld pass completely.

WHAT IS BE DOING TO PREVENT THIS?

车间负责人(Foreman): *Yang Xuehui* 日期(Date): 2007.12.26

处理意见

Disposition :

- 1. Preheat before gouging, the temperature is not below 65°C;
- 2. Gouge off the defect weld completely ,and must prepare a right joint ,the joint details should refer to the approved WPS-repair;
- 3. Grind smoothly the gouged surface;
- 4. Check with MT or other NDT method to make sure the defect remove completely;
- 5. Preheat and the interpass temperature control according to the WPS-repair;
- 6. Postheat after welding ,keep the temperature between 230°and 315°C. Deciding how long the postheat time is according to the gouged depth. Usually per 25mm an hour ,not less than an hour;
- 7. Perform NDE in accordance with according to the approved shop drawing.

- 1. 碳刨之前必须先进行预热，温度不低于 65° C；
- 2. 缺陷被完全清除后，必须准备一个正确的接头型式，具体接头型式请参见对应的修补焊接工艺规程 (WPS)；
- 3. 将碳刨处打磨光滑；
- 4. 用 MT 或其它的无损检测方法证实缺陷被完全清除；
- 5. 修补区域的预热温度和道间温度请见批准后的相应的 WPS；
- 6. 焊后进行后热，温度为 230° C~315° C，时间根据返修的深度确定，每 25mm/小时，但不少于 1 小时；
- 7. 按图纸要求用探伤检测焊缝。

State of California  
DEPARTMENT OF TRANSPORTATION  
Pursuant Section 54.06 of the  
Standard Specifications  
Initial *SE* Date: 1/4/08

工 艺 *Luening* 2007.12.27      审核: Approved by

日期 Date



# 关键焊缝返修报告

## Critical Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	MUC-MA107 MUC-MA102	报告编号 Report No.	CWR(CT)033
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M LOWER B OX ANGLE AB	NDT报告编号 Report No.of NDT	CT-UT-088
项目编号 Project No.:	ZP06-787				

纠正措施:

**Correction action to prevent re occurrence:**

1. 严格按照焊接工艺技术规程操作。
  2. 加强焊接监控和道间清理。
1. Strictly perform according to the welding procedure specification.
  2. Improve monitoring of welding and interpass cleaning.

~~如何~~ How Will QC "IMPROVE" MONITORING?

车间负责人(Foreman): Yang Xuehui 日期(Date): 2007.12.26

参照的WPS编号 Repair WPS No.	WPS-345-FCAW-1G(1F)-Repair	工艺员 technologist	<u>Luojunwei</u> 12/27
返修(碳刨)前预热温度 Preheat temperature before gouging	90°C	返修的缺陷 Description of discontinuity	夹渣 slag
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	212°C
最大碳刨深度 Max. depth of gouging	38 mm	碳刨总长 <input type="checkbox"/> APPROVED Total length of gouging <input checked="" type="checkbox"/> APPROVED AS NOTED	2400 mm
焊工 welder	<u>Chang chuang gang 053870</u> <u>Bai wen ming 060236</u>	焊接类型 welding type	焊接位置 position
焊接电流 Current	310 A	焊接电压 Voltage	31.2V
返修后检查 Inspection After repairing:		DEPARTMENT OF TRANSPORTATION	
外观检查 VT result	o/k	检验员 Inspector	Signed: <u>[Signature]</u> for RICK MERRIN Structural Representative
NDT复检 NDT result	P2J	探伤员 NDT person	Date: <u>2008.1.8</u>
见证: Witness/Review:			
备注: Remark:			



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 CT-UT-088R1      DATE 2008.01.08      PAGE 1 OF 1      Revision No: 0

PROJECT NO.: 工程编号 ZP06-787		CONTRACTOR: CALTRANS	
ITEMS NAME: 114M BOX AB ANGLE 部件名称	DRAWING NO.: MDC-MA107 B/C 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 FCAW	JOINT TYPE 焊缝类型 CORNER JOINT	CALIBRATION DUE DATE 仪器校正有效期 Jan. 1 <sup>ST</sup> , 2008	
EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 051392712,061488510
CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709-50T-2 / 90/60 mm	

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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 探头角度	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 Flaring	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									a	b	c	d	Length 长度		
MUC-MA107B/C-4A/4B	1R1	59.0	A	1	37	30	2	+5	100	172	34	-20	1510	REJ.	
	2R1	68.5	A	1	45	35	6	+4	10	99	36	-35	1260	REJ.	

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EXAMINED BY 主探 <u>Liliming</u> 2008.01.08 LEVEL - II SIGN / DATE	REVIEWED BY 审核: <u>Zshuiqin</u> LEVEL - II SIGN / DATE 2008.01.08
质量经理 / QCM <u>Hufang</u> 2008.1.15 签字 SIGN / 日期 DATE	用户CUSTOMER _____ 签字 SIGN / 日期 DATE



# 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	MUC-MA107B/C	报告编号 Report No.	WR062
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M LOWER B OX ANGLE AB	NDT报告编号 Report No.of NDT	CT-UT-088R1
项目编号 Project No.:	ZP06-787				

### 焊缝缺陷描述:

#### Description of welding discontinuity:

Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length. (UT探伤发现的缺陷总长度小于最大允许总长度。) MUC-MA107B/C-4A/4B

检验员 (Inspector):

Li Liming

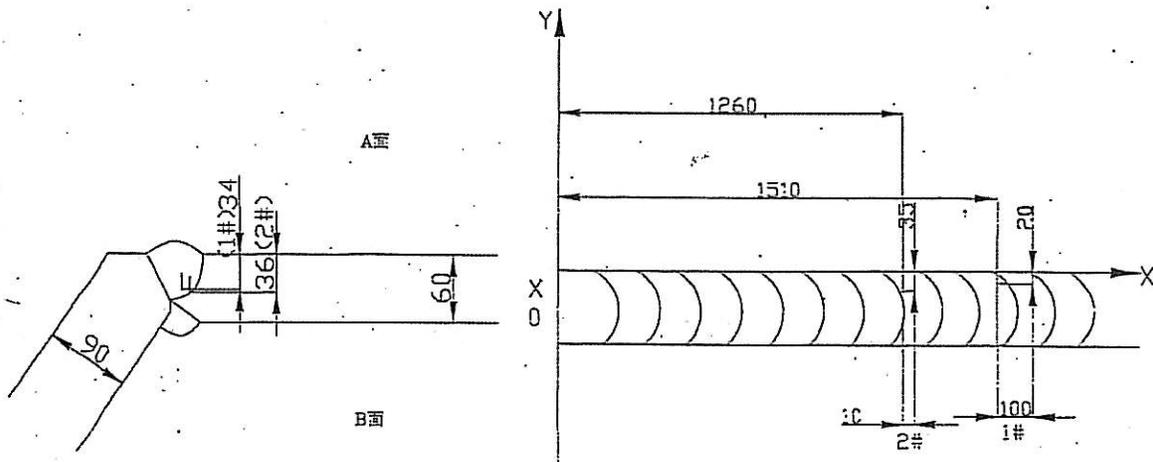
日期(Date):

08.1.08

08.01.08

### 焊缝返修位置示意图:

#### Draft of welding discontinuity:



WELD NUMBER: MUC-MA107B/C-4A/4B

产生原因:

Caused:

1. 焊道没清理干净。
1. Did not clear the weld pass completely.

车间负责人(Foreman): *Lu Yefei* 日期(Date):2008.1.9

处理意见

Disposition:

1. Gouge off the defect weld;
  2. Grind smoothly the gouged surface;
  3. If User's request ,check with MT or other NDT method to make sure the defect remove compelety;
  4. Preheat and the interpass temperature control according to the relative WPS-repair;
  5. Check the welding according to the approved shop drawing.
- 
- 1、 请将有缺陷的焊缝碳刨去除;
  - 2、 将碳刨处打磨光滑;
  - 3、 如用户要求, 用 MT 或其它的无损检测方法证实缺陷被完全清除;
  - 4、 按批准后返修焊接工艺规程 WPS 要求进行预热和控制道间温度;
  - 5、 按图纸要求检测焊缝。

工艺: *Luwenyu 208.1.9*  
Technical engineer

审核: *Hu Gang*  
Approved by

日期 *2008.1.9*  
Date



# 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.	MUC-MA107B/C	报告编号 Report No.	WR062
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M LOWER B OX ANGLE AB	NDT报告编号 Report No.of NDT	CT-UT-088R1
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。
1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): *Lu Yafei* 日期(Date): 2008.1.9

参照的WPS编号 Repair WPS No.	WPS-345-FCA W-1G(1F)-Repair	工艺员 technologist	<i>Lumenyue 2008.1.9</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>80°C</i>	返修的缺陷 Description of discontinuity	<i>incomplete fusion 未熔合</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>180°C</i>
最大碳刨深度 Max. depth of gouging	<i>40</i>	碳刨总长 Total length of gouging	<i>200mm</i>
焊工 welder <i>chang chuan can</i>	焊接类型 welding type <i>对接</i>	焊接位置 position <i>1G</i>	
焊接电流 Current <i>310</i>	焊接电压 Voltage <i>30.5</i>	焊接速度 Speed <i>300</i>	
返修后检查 Inspection After repairing:			
外观检查 VT result <i>合格 Acc</i>	检验员 Inspector <i>洪曦 (Chen xi) 07072021</i>	日期 Date <i>2008.01.10</i>	
NDT复检 NDT result <i>合格 ACC</i>	探伤员 NDT person <i>Xue Haiyang</i>	日期 Date <i>2008.01.10</i>	
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 CT-UT-088R2

DATE 2008.01.10

PAGE 1 OF 1

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: 114M BOX AB ANGLE  
部件名称DRAWING NO.: MUC-MA107 B/C  
图号CALTRANS CONTRACT NO.: 04-0120F4  
加州工程编号REFERENCING CODE 参考规范  
AWS D1.5-2002ACCEPTANCE STANDARD 接受标准  
AWS D1.5-2002(Table 6.3)PROCEDURE NO. 程序编号  
ZPQC-UT-01WELDING PROCESS 焊接方法  
FCAWJOINT TYPE 焊缝类型  
CORNER JOINTCALIBRATION DUE DATE 仪器校正有效期  
Jan. 1<sup>ST</sup>, 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

CALIBRATION BLOCK 试块  
AWS IIV BLOCK TYPE IICOUPLANT 耦合剂  
C.M.CMATERIAL/THICKNESS 材料厚度  
A709-50T-2 / 90/60 mm

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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	Depth from Surface 距表面深度
MUC-MA107B/C-4A/4B	1R2	59.0						30								ACC.	
	2R2	68.5						35								ACC.	

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EXAMINED BY 主探

REVIEWED BY 审核:

*Xue Haiyang* 2008.01.10  
LEVEL-II SIGN / DATE

*Lili Wang* 2008.01.10  
LEVEL-II SIGN / DATE

质量经理 / QCM

用户 CUSTOMER

*Hu Gang* 2008.1.15  
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 CT-UT-097      DATE 2007.12.29      PAGE 1 OF 2      Revision No: 0

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

ITEMS NAME: 114M BOX AB ANGLE      DRAWING NO.: MUC-MA106 B/C      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  
 FCAW      CORNER JOINT      Jan. 1<sup>ST</sup>, 2008

EQUIPMENT 设备      MANUFACTURER 制造商      MODEL NO. 样式编号      SERIAL NO. 序列编号  
 UT SCOPE      PANAMETRICS      EPOCH-4B      051392712,061488510

CALIBRATION BLOCK 试块      COUPLANT 耦合剂      MATERIAL/THICKNESS 材料厚度  
 AWS IIV BLOCK TYPE II      C.M.C      A709-50T-2 / 60/90 mm

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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		
MUC-MA106 B/C-4A/4B	1	68.4	A	1	43	36	4	+3	140	70	28	-13	750	REJ.	
	2	68.4	A	1	47	36	8	+3	50	124	45	-35	2230	REJ.	
	3	68.4	B	1	46	36	8	+2	50	97	36	-2	1730	REJ.	
	4	68.4	B	1	46	36	5	+5	40	87	32	-2	2100	REJ.	
		59.0												ACC.	

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EXAMINED BY 主探  
Xue Hairong  
 LEVEL-II SIGN /      DATE 2007.12.29

REVIEWED BY 审核:  
Zshuqin  
 LEVEL-II SIGN /      DATE 2007.12.29

质量经理 / QCM  
 \_\_\_\_\_  
 签字 SIGN / 日期 DATE

用户 CUSTOMER  
 \_\_\_\_\_  
 签字 SIGN / 日期 DATE



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 CT-UT-097

DATE 2008.02.03

PAGE 2 OF 2

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: 114M BOX AB ANGLE  
部件名称

DRAWING NO.: MUC-MA106 B/C  
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  
FCAW

JOINT TYPE 焊缝类型  
CORNER JOINT

CALIBRATION DUE DATE 仪器校正有效期  
Jan. 1<sup>ST</sup>, 2009

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

CALIBRATION BLOCK 试块  
AWS IIV BLOCK TYPE II

COUPLANT 耦合剂  
C.M.C

MATERIAL/THICKNESS 材料厚度  
A709-50T-2 / 60/90 mm

### 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 °	2.5 MHz	18x18 mm				
Changchao	0 °	2.5 MHz	20 mm	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		
MUC-MA106 B/C-4A/4B	1	68.9	B	1	29	36	2	-9	27	50	18	+14	330	REI.	

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EXAMINED BY 主探

REVIEWED BY 审核:

*Xuehanyong* 2008.02.03  
LEVEL - II SIGN / DATE

*Z-shuigun*  
LEVEL - II SIGN / DATE 2008.02.03

质量经理 / QCM

用户CUSTOMER

*HuGang* 2008.2.5

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE



# 焊缝返修报告

版本 Rev. No.

## Welding Repair Report

0

项目名称 Project Name	英国海湾大桥 SFOBB	部件图号 Drawing No	MUC-MA106B/C	报告编号 Report No.	WR069
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M BOX AB ANGLE	NDT报告编号 Report No. of NDT	CT-UT-097
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

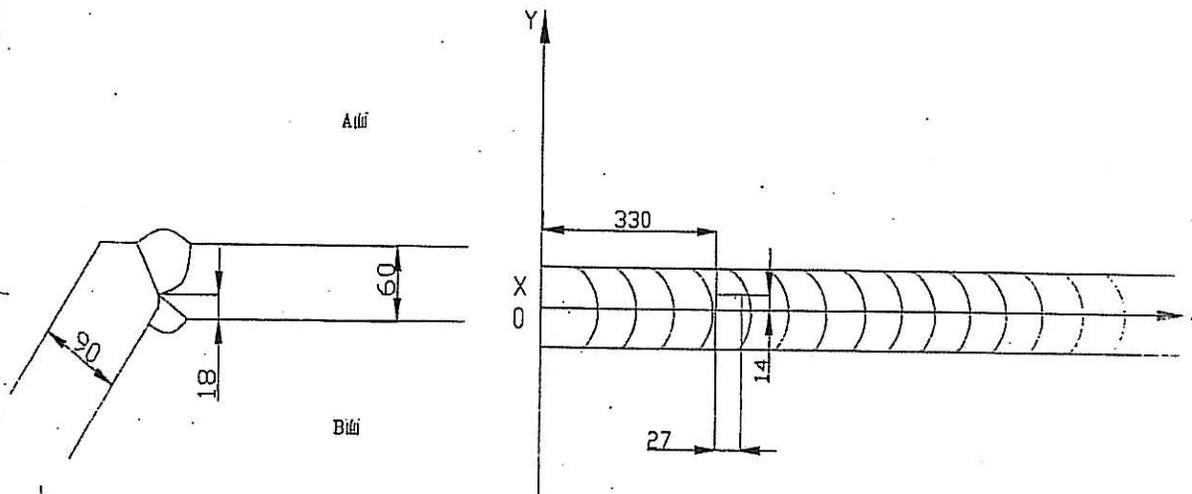
Description of welding discontinuity:

Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length. (UT探伤发现的缺陷总长度小于最大允许总长度。) MUC-MA106B/C-4A/4B

检验员 (Inspector): Xue Hairong 日期(Date): 08.02.03

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: MUC-MA106B/C-4A/4B

产生原因:

Caused:

1. Did not clear the weld pass completely.

车间负责人(Foreman): Lu Yeferi

2008.02-05  
日期(Date):2008.02.05

处理意见

Disposition :

1. Gouge off the defect weld;
2. Grind smoothly the gouged surface;
3. If User's request ,check with MT or other NDT method to make sure the defect remove completely;
4. Preheat and the interpass temperature control according to the relative WPS-repair;
5. Check the welding according to the approved shop drawing.

- 1、请将有缺陷的焊缝碳刨去除；
- 2、将碳刨处打磨光滑；
- 3、如用户要求，用 MT 或其它的无损检测方法证实缺陷被完全消除；
- 4、按批准后返修焊接工艺规程 WPS 要求进行预热和控制道间温度；
- 5、按图纸要求检测焊缝。

工艺: Yan Xingla 2008.2.5  
Technical engineer

审核: Hu Gang  
Approved by

日期 2008.2-5  
Date

#R787-QCP-900



# 焊缝返修报告

## Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	MUC-MA106B/C	报告编号 Report No.	WR069
合同号 Contract No.:	04-0120F4	部件名称 Items Name	114M BOX AB ANGLE	NDT报告编号 Report No.of NDT	CT-UT-097
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. Improve monitoring of welding and interpass cleaning.
2. Strictly perform welding procedure.

 车间负责人(Foreman): *Lu Yefei*      日期(Date): 2008.02.05

参照的WPS编号 Repair WPS No.	WPS-345-FCAW-1 G(1F)-Repair	工艺员 technologist	<i>Yan Xiang (2008.02.05)</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>10°C</i>	返修的缺陷 Description of discontinuity	<i>夹渣</i>
焊前处理检查 Inspection before welding	<i>VT 合格</i>	焊前预热温度 Preheat temperature before welding	<i>200°C</i>
最大碳刨深度 Max. depth of gouging	<i>25mm</i>	碳刨总长 Total length of gouging	<i>130mm</i>
焊工 welder <i>053870</i>	焊接类型 welding type <i>FCAW</i>	焊接位置 position	<i>1G</i>
焊接电流 Current <i>315A</i>	焊接电压 Voltage <i>31.3V</i>	焊接速度 Speed	<i>320</i>

返修后检查  
Inspection After repairing:

外观检查 VT result <i>合格</i>	检验员 Inspector <i>chen xi</i> <i>0707201</i>	日期 Date <i>2008.02.15</i>
NDT复检 NDT result <i>ACC</i>	探伤员 NDT person <i>Xue Harong</i>	日期 Date <i>2008.02.15</i>

见证:  
Witness/Review:备注:  
Remark:

#R787-QCP-900



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 CT-UT-097R1

DATE 2008.01.08

PAGE 1 OF 2

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: 114M BOX AB ANGLE

DRAWING NO.: MUC-MA106 B/C

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

FCAW

CORNER JOINT

Jan. 1<sup>ST</sup>, 2008

EQUIPMENT 设备

MANUFACTURER 制造商

MODEL NO. 样式编号

SERIAL NO. 序列编号

UT SCOPE

PANAMETRICS

EPOCH-4B

051392712,061488510

CALIBRATION BLOCK 试块

COUPLANT 耦合剂

MATERIAL/THICKNESS 材料厚度

AWS IIW BLOCK TYPE II

C.M.C

A709-50T-2 / 60/90 mm

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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 Reading	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
MUC-MA106 B/C-4A/4B	1R1	68.5						35							ACC.	
	2R1	68.5						35							ACC.	
	3R1	68.5						35							ACC.	
	4R1	68.5						35							ACC.	
		59.0						30							ACC.	

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EXAMINED BY 主探

REVIEWED BY 审核:

LEVEL - II SIGN / DATE

LEVEL - II SIGN / DATE 2008.01.08

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 CT-UT-097R1      DATE 2008.02.15      PAGE 2 OF 2      Revision No: 0

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

ITEMS NAME: 114M BOX AB ANGLE      DRAWING NO.: MDC-MA106 B/C      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  
 FCAW      CORNER JOINT      Jan. 1<sup>st</sup>, 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

CALIBRATION BLOCK 试块      COUPLANT 耦合剂      MATERIAL/THICKNESS 材料厚度  
 AWS IIV BLOCK TYPE II      C.M.C      A709-50T-2 / 60/90 mm

### 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 °	2.5 MHz	18x18 mm	Changchao	60 °	2.5 MHz	18x18 mm
Changchao	0 °	2.5 MHz	20 mm	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	Alignment Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
MDC-MA106 B/C-4A/4B	IR1	68.5					36								ACC.	
		60.2					33								ACC.	
BLANK																

EXAMINED BY 主探  
Xuehaisong  
 LEVEL - II SIGN 1      DATE 2008.02.15

REVIEWED BY 审核:  
Zshulgin  
 LEVEL - II SIGN 1      DATE 2008.2.15

质量经理 / QCM  
HuGang 2008-2-18  
 签字 SIGN / 日期 DATE

用户 CUSTOMER  
 \_\_\_\_\_  
 签字 SIGN / 日期 DATE



No. CT-099

# LETTER OF RESPONSE

DATE: 2008.02.29

To: AB/F Steve Lawton

From: Li Liming

Subject: Response to CT NCR-000062

*/ZPMC 60 CJK ATZ2/00*

Mr. Lawton:

*/ZPMC 60 CJK ATZ2/00*

ZPMC has generated internal NCR-CT-019 in Response to CT NCR-000062, regarding the incorrect procedure on the Skin A and B corner joint on the 114m Mockup, ZPMC used the scanning procedure for a corner joint at the butt joint on the drawings, now all the internal splice plates have been fitted, it is hard to perform the UT under the condition, ZPMC has been aware of this issue and conduct the UT according to the Butt joint UT procedure from on, ZPMC will strength the inspector's checking for the angle of skin plate assembly and the NDT technician's checking and differentiation for the butt joint and corner joint to implement the right UT method.

*\* So zpmc request NCR-000062 can be closed basing on the corner UT procedure*

Attached you will find a copy of ZPMC internal NCR-CT-019.

*/ZPMC 60 CJK ATZ2/00*

If further information is needed, Please contact me.

Sincerely

Li Liming

*Li Liming*

*2008.02.29*

<input type="checkbox"/>	APPROVED
<input type="checkbox"/>	APPROVED AS NOTED
<input checked="" type="checkbox"/>	NOT APPROVED
Pursuant to Section 5-1.02 of the Standard Specifications State of California DEPARTMENT OF TRANSPORTATION	
Signed	<i>Tai-Lin Liu</i> Structure Representative
Date	<i>03/13/08</i>



# 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-CT-019 / ZPMC 60
Item: the problem of A/B corner UT testing method 名称描述: A/B 角探伤问题	Item Number: 件号: NA	Drawing: 图号:
Location: 114M Mock Up 位置: 114 米段	Date: 2008-02-26 日期: 2008-02-26	

Description of Nonconformance: 不符合项状态描述:

CT inspector found ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5(2002), section 6: "Testing Procedure", Subsection 6.19.6.1: "The testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5(2002), Section 6: "Testing Procedure", Table 6.2, "Testing Angle".

加州检验员发现 ZPMC 对 A/B 角的探伤使用了错误的方法。A/B 角的焊缝应当是对接焊缝，需用对接焊缝的检测方法对其进行探伤，而 ZPMC 采用了角焊缝的检测方法。

依据请参见:  
AWS D1.5(2002), 第 6 章, 6.19.6.1  
AWS D1.5(2002), 第 6 章, 表 6.2

APPROVED AS NOTED  
 NOT APPROVED

Pursuant to Section 5-1.02  
of the Standard Specifications  
State of California  
DEPARTMENT OF TRANSPORTATION

Signed Tai-Lin Liu  
Structure Representative

Work By: Lu Liming Prepared by: Du Wating Reviewed by QCE: Xu Jun

施工方: Lu Liming 准备: Du Wating 质量工程师批准: Xu Jun

Drawing Error     Material Defect     Fabrication Error     Other  
图纸错误                      材料缺陷                      制作错误                      其他原因

Disposition:  Use as is     Repair     Reject  
处理措施:                      回用                      返修                      拒收

Recommendation:  
建议:

ZPMC suggested to use it as is, because it is hard to perform the UT under the condition now that all the exterior and internal splice plates have been fitted in the 114M mock up. ZPMC also had performed UT for the A/B corner and the weld was accepted. As to the mock up, ZPMC has been aware of this issue and will conduct the UT according to the Butt joint UT procedure from now on.

ZPMC 建议回用此部件，因为根据现在的模型段状态已经很难再对 A/B 角进行 UT 重检，所有的内外连接板已经装配，另 ZPMC 也对 A/B 进行了 UT 监测并验收合格。鉴于模型段，ZPMC 已经认识到此问题并且将会在以后的产品中按照对接焊缝的要求进行探伤。

HAS UT BEEN PERFORMED USING THE CORRECT UT PROCEDURE? THIS NOT CLEAR.

GHK  
4/22/08

Prepared by: L. Liminf 2008.02.26  
准备

Approved by QCA: Hu Gang 2008.2.27  
质量经理批准

Reason for Nonconformance:

不符合原因:

ZPMC didn't perform the UT correctly for the A/B corner.  
ZPMC 没有对 114 米段 A/B 角实施正确的 UT 探伤方法。

QC FAILED TO CHECK UT PROCEDURE  
PRIOR TO ALLOWING THE TECHNICIAN TO PROCEED.

Prevention of Re-occurrence:

预防措施:

1. strengthen the inspector's checking for the angle of skin plate assembly.  
加强检验人员对面板拼接装配角度的测量
2. strengthen the NDT technician's checking and differentiation for the Butt joint and corner joint to implement the right UT method.  
加强探伤人员对接头形式的检查和鉴别, 以便实施正确的 UT 方法。

WHAT DOES  
THIS MEAN?

Approved by/批准: L. Liminf 2008.2.26

Technical Justification for Use-As-Is/Repair:  
回用或返修的技术依据:

Attachment

附件

Non-attachment

无附件

Reviewed /批准: \_\_\_\_\_

Verification:

Acceptable

确认:

可接受

Unacceptable

不可接受

Verified by QCI/质检确认: \_\_\_\_\_

APPROVED

APPROVED AS NOTED

NOT APPROVED

Reviewed by QCA/质检主任审核: \_\_\_\_\_

#R787-QCP-1300

Pursuant to Section 5-1.02  
of the Standard Specifications  
State of California  
DEPARTMENT OF TRANSPORTATION

Signed

Jai-Lin Liss  
Structure Representative

Date

03/13/08



**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, China

Report No: NCR-000062

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 30-Jan-2008

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

NCR #: ZPMC-0060

**Type of problem:**

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: Tower-114m Mockup  
 Procedural  Procedural  Descriptor:

**Description of Non-Conformance:**

ABF/ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ABF/ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

**Applicable reference:**

1) AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2"

2) AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

Who discovered the problem: Alfredo Acuna, Quality Assurance Inspector

Name of individual from Contractor notified:

Time and method of notification:

Name of Caltrans Engineer notified: Ching Chao, Structures Construction Senior

Time and method of notification: 01-30-2008, Verbal

QC Inspector's Name: Xu Jun, ZPMC Quality Control Inspector

Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

Unknown at this time.

**Comments:**

This report is for the purpose of determining conformance with the contract and the specifications for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

<p>APPROVED AS NOTED <input type="checkbox"/></p> <p>NOT APPROVED <input checked="" type="checkbox"/></p> <p>Pursuant to Section 5-1.02 of the Standard Specifications State of California DEPARTMENT OF TRANSPORTATION</p> <p>Signed <u>Jal-Lin Liu</u> Structure Representative</p> <p>Date <u>03/13/08</u></p>
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**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**

(Continued Page 2 of 2)

Inspected By: Wabbeh, Mazen

Quality Assurance Inspector

Reviewed By: Wabbeh, Mazen

QA Reviewer

- APPROVED
- APPROVED AS NOTED
- NOT APPROVED

Pursuant to Section 5-1.02  
of the Standard Specifications  
State of California  
DEPARTMENT OF TRANSPORTATION

Signed Jai-Lin Lee  
Structure Representative

Date 03/13/08

**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, China**Report No:** NCS-000070**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Mar-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0060**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b>	

**Date the Non-Conformance Report was written:** 30-Jan-2008**Description of Non-Conformance:**

ABF/ZPMC performed the incorrect UT scanning procedure on the skin A to skin B corner joint on the 114m Mockup. The joint is detailed as a butt joint on the drawings but ABF/ZPMC used the scanning procedure for a corner joint. Testing shall be done in accordance with AWS D1.5 (2002), Section 6; "Testing Procedures", Subsection 6.19.6.1:

"The Testing angle and scanning procedure shall be in conformance with those shown in Table 6.2" and AWS D1.5 (2002), Section 6; "Testing Procedures", Table 6.2, "Testing Angle"

**Contractor's proposal to correct the problem:**

ZPMC has generated an internal NCR regarding the incorrect scanning procedure used on the corner joint. Currently the internal splice plates for the 114m mockup are in place and the corner joint is difficult to access so ZPMC is requesting that the NDT results be accepted as is. ZPMC plans to emphasize checking the angle between the skin plate assembly as well as differentiation between butt and corner joints by their NDT technicians.

**Corrective action taken:**

ZPMC has generated an internal NCR regarding the incorrect scanning procedure used on the corner joint.

**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 Joshua Ishibashi, who represents the Office of Structural Materials for your project.

**Inspected By:** Ishibashi, Josh

Quality Assurance Inspector

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# QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**Reviewed By:** Ishibashi,Josh

QA Reviewer