

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



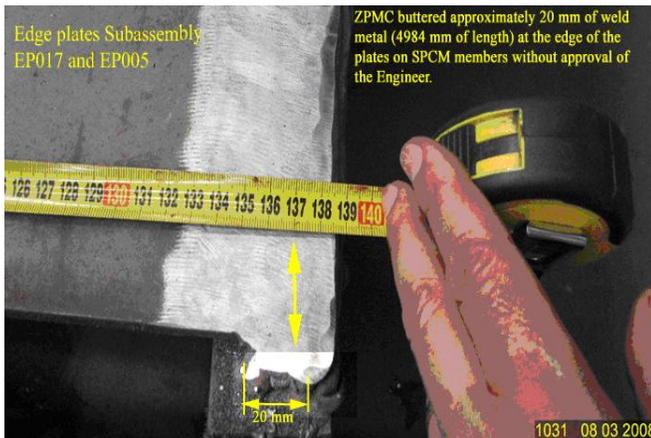
Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000171**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Jul-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0155**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> EP-017B and EP-05B
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b> OBG Edge Panels	

**Reference Description:** Unapproved base metal repair EP-17B, 5B**Description of Non-Conformance:**

The Contractor performed critical weld repair on SPCM material without Engineer approval. The Contractor corrected the length of edge panels by building up with weld metal to an approximate length of 20mm without prior Engineer approval. The maximum allowable thickness of weld to be deposited is 4.5mm for edge plates with nominal thickness of 18mm. This occurred on edge panels EP017 and EP005.

**Applicable reference:**

AWS D1.5, Sec. 12.17.2.(7): "Deposition of weld metal up to 10 mm deep, or 1/4 the base-metal thickness, whichever is less to correct for length of joint geometry."

**Who discovered the problem:** Quality Assurance (QA), Alfredo Acuna**Name of individual from Contractor notified:** ABF representative, Li Man Kit.**Time and method of notification:** August 03, 2008 / verbal notification at 1500 Hours**Name of Caltrans Engineer notified:** Ching Chao

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** Verbal notification on 08-05-2008

**QC Inspector's Name:** ZPMC QC Zhang Jiadi Ken

**Was QC Inspector aware of the problem:** Yes No

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

**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 Abifhram Velasco, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Velasco,Abifhram	SMR
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<b>Reviewed By:</b>	Velasco,Abifhram	SMR
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**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:** 13-Aug-2008

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

**Dear:** Mr. Charles Kanapicki

**Job Name:** SAS Superstructure

**Attention:** Mr. Dave Williams Consultant

**Document No:** 05.03.06-000145

**Subject:** NCR No. ZPMC-0155

**Reference Description:** Unapproved base metal repair EP-17B, 5B

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:** N/A

### Remarks:

The Contractor performed critical weld repair on SPCM material without Engineer approval. The Contractor corrected the length of edge panels by building up with weld metal to an approximate length of 20mm without prior Engineer approval. The maximum allowable thickness of weld to be deposited is 4.5mm for edge plates with nominal thickness of 18mm. This occurred on edge panels EP017 and EP005.

See attached NCR #ZPMC-0155 for details.

### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

**Transmitted by:** Ching Chao

**Attachments:** ZPMC-0155

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

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000145

**Subject:** NCR No. ZPMC-0155

**Dated:** 25-Aug-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000100 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has been notified that the fabrication procedure shall be followed or the procedure shall be revised prior to use

ZPMC has been notified that the fabrication procedure shall be followed or the procedure shall be revised prior to use.

**Submitted by:** Mackey, Kim

**Attachment(s):** ABF-NPR-000100R00

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### Caltrans' comments:

**Status:** REJ

**Date:** 03-Oct-2008

This proposed resolution regarding ZPMC following fabrication procedures does not address the issue in the referenced Non-Conformance ZPMC-0155, which was issued for welding of a critical weld repair prior to Engineer approval.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0155 at that time.

**Submitted by:** Wright, Doug

**Attachment(s):** NPR CT Comments

**Date:** 03-Oct-2008

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000145

**Subject:** NCR No. ZPMC-0155

**Dated:** 08-Oct-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000100 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** ABF has provided instructions to ZPMC that when building up weld preparations on SPCM material, to do so in accordance with Section 12 paragraph 12.17.2 (7).

ZPMC performed weld build up on SPCM material without Engineers approval which is in violation of contract requirements. Discussions with ZPMC revealed they mis-interpreted the code using section 3 when ZPMC should have used section 12. ABF has provided instructions to ZPMC that when building up weld preparations on SPCM material, to do so in accordance with Section 12 paragraph 12.17.2 (7).

### Submitted by:

**Attachment(s):** ABF-NPR-000100R01

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### Caltrans' comments:

**Status:** AAP

**Date:** 10-Nov-2008

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0155 at that time.

**Submitted by:** Wright, Doug

**Date:** 11-Nov-2008

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000145

**Subject:** NCR No. ZPMC-0155

**Dated:** 03-Dec-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000100 Rev: 02

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC requests closure of this NCR based on attached documentation.

Please see attached.

**Submitted by:**

**Attachment(s):** ABF-NPR-000100R02; doc to close this NCR

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**Caltrans' comments:**

**Status:** CLO

**Date:** 25-Dec-2008

The proposed resolution is acceptable. The welding repair report for the repair is included, and the welds in question have been accepted by VT, MT, and UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0155 is closed.

**Submitted by:** Wright, Doug

**Date:** 30-Dec-2008

**Attachment(s):**



## TRANSMITTAL LETTER

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 12/01/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: CALTRANS NCR FOR CLOSURE

SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.B-322 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER NCR-000171(ZPMC-0155).
- (3) COPY OF WELD REPAIR REPORTS
- (4) COPY OF VT/UT/MT REPORTS

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:

Rosenberg  
PLAN HOLDER

Dec 1st, 2008 16:30 PM  
DATE

ABFJV  
COMPANY

\_\_\_\_\_  
PHONE NO.

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



No. B-322

## LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-12-1

REGARDING: NCR-000171(ZPMC-0155)

With this letter of response, ZPMC requests closure for Caltrans NCR-000171 (ZPMC-0155). As the comments from caltrans: please provide documentation that the weld repairs were performed and that the repairs were acceptable. So we submit the documentation as follow.

So ZPMC considers NCR-000171(ZPMC-0155) can be closed.

Please check the attached documentation for acceptance and close the NCR-000171(ZPMC-0155).

ATTACHMENT:

NCR-000171(ZPMC-0155)

Weld repair reports

VT/UT/MT reports

*zhaoshuangbao*

*2008.12.1*

*[Signature]*  
ABF QCY  
2 DEC. 08



**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:** 13-Aug-2008

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

**Dear:** Mr. Charles Kanapicki  
**Attention:** Mr. Dave Williams Consultant

**Job Name:** SAS Superstructure

**Subject:** NCR No. ZPMC-0155

**Document No:** 05.03.06-000145

**Reference Description:** Unapproved base metal repair EP-17B, 5B

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:** N/A

**Remarks:**

The Contractor performed critical weld repair on SPCM material without Engineer approval. The Contractor corrected the length of edge panels by building up with weld metal to an approximate length of 20mm without prior Engineer approval. The maximum allowable thickness of weld to be deposited is 4.5mm for edge plates with nominal thickness of 18mm. This occurred on edge panels EP017 and EP005.

See attached NCR #ZPMC-0155 for details.

**Action Required and/or Action Taken:**

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

**Transmitted by:** Ching Chao

**Attachments:** ZPMC-0155

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Contract Files, Ching Chao  
**File:** 05.03.06

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



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

Contract #: 04-0120F4  
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9  
 File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000171

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 03-Jul-2008

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

NCR #: ZPMC-0155

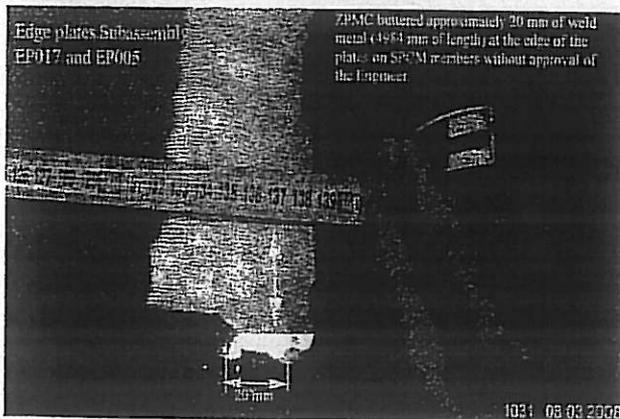
### Type of problem:

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: EP-017B and EP-05B  
 Procedural  Procedural  Descriptor: OBG Edge Panels

Reference Description: Unapproved base metal repair EP-17B, 5B

### Description of Non-Conformance:

The Contractor performed critical weld repair on SPCM material without Engineer approval. The Contractor corrected the length of edge panels by building up with weld metal to an approximate length of 20mm without prior Engineer approval. The maximum allowable thickness of weld to be deposited is 4.5mm for edge plates with nominal thickness of 18mm. This occurred on edge panels EP017 and EP005.



### Applicable reference:

AWS D1.5, Sec. 12.17.2.(7): "Deposition of weld metal up to 10 mm deep, or 1/4 the base-metal thickness, whichever is less to correct for length of joint geometry."

Who discovered the problem: Quality Assurance (QA), Alfredo Acuna

Name of individual from Contractor notified: ABF representative, Li Man Kit.

Time and method of notification: August 03, 2008 / verbal notification at 1500 Hours

Name of Caltrans Engineer notified: Ching Chao

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** Verbal notification on 08-05-2008

**QC Inspector's Name:** ZPMC QC Zhang Jiadi Ken

**Was QC Inspector aware of the problem:**  Yes  No

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

**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 Abifhram Velasco, who represents the Office of Structural Materials for your project.

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**Inspected By:** Velasco, Abifhram

SMR

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**Reviewed By:** Velasco, Abifhram

SMR

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# 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	EP5	报告编号 Report No.	B-WR641
合同号 Contract No.:	04-0120F4	部件名称 Items Name	腹板EP5B Edge Plate	NDT报告编号 Report No.of NDT	
项目编号 Project No.:	ZP06-787				

### 焊缝缺陷描述:

#### Description of welding discontinuity:

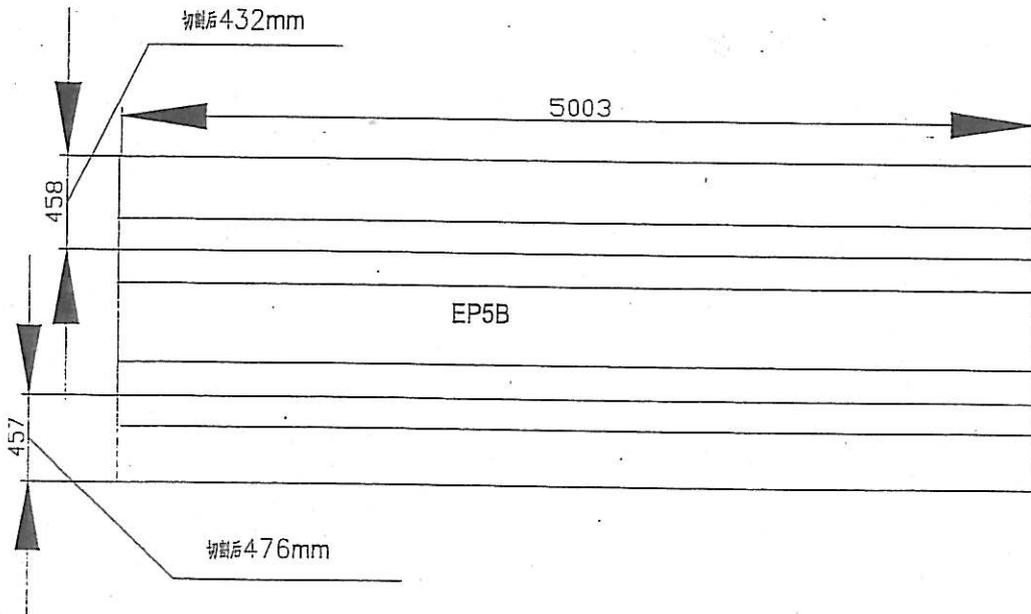
胡国兴施工队在切割3A-E角单元板EP5B一边余量时割短16mm, 具体见下图:

The EP5B of 3A-E corner section was cut more 16mm by Work Team: Hu Guoxing; the follo wing shows the detail position.

检验员 (Inspector): Luan zhaogang 日期 (Date): 2008.07.29

### 焊缝返修位置示意图:

#### Draft of welding discontinuity:



产生原因:

Caused:

由于ACL线洋冲眼敲打有误差, 导致以洋冲眼为基准点划线切割余量后短16mm。

There is some error during fixing on ACL causing the cutting line offset 16mm.

*Li Dongliang*

车间负责人(Foreman): Li Dongliang

*2008.07.29*

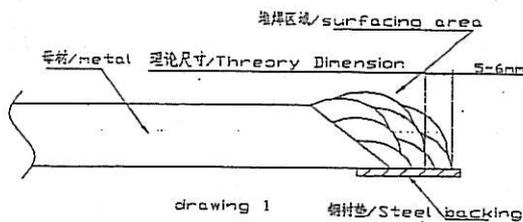
日期(Date): 2008-7-29

处理意见

Disposition:

1. 对需要修补的区域进行VT与MT检测;
2. 按照图一所示加钢衬垫;
3. 根据返修的焊接返修工艺规程(WPS)进行预热及焊接, 焊后尺寸要比实际尺寸大5-6mm;
4. 去除钢衬垫, 将修补焊缝打磨至与周围母材平齐;
5. 对返修区域做NDT (VT MT UT) 以保证金属融合的深度;
6. 按照图纸要求重新进行切割。

附图形式:



1. Verify with VT and MT repair area is free of all defects.
2. Add ceramic backing according to the attached drawing 1;
3. Preheat and weld according to the relevant WPS and dimension of lineament is more than 5-6mm necessary actual dimension;
4. Remove the ceramic backing and grind the weld flush with around metal;
5. Perform post NDT (VT MT UT) of repaired area to insure sound weld metal has been deposited.
6. Prepare cutting again according to the shop drawings

工艺:  
Technical engineer *NM Refers*

审核:  
Approved by *Hu Gang*

日期  
Date *2008.07.30*



# 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.	EP5	报告编号 Report No.	B-WR641
合同号 Contract No.:	04-0120F4	部件名称 Items Name	腹板EP5B Edge Plate	NDT报告编号 Report No. of NDT	
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective action to prevent re occurrence;

1. 余量修割线划出后, 对照相应施工图纸认真检查, 质检确认无误后再进行余量修割。  
1. Check cutting line according to the drawing by inspector before cutting.

车间负责人(Foreman): Li Dongliang

日期(Date): 2008.07.29

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-FCM-Repair WPS-345-FCAW-1 G(1F)-FCM-Repair	工艺员 technologist	MM rejes 2008.07.30
返修(碳刨)前预热温度 Preheat temperature before gouging	N/A	返修的缺陷 Description of discontinuity	N/A
焊前处理检查 Inspection before welding	ACC	焊前预热温度 Preheat temperature before welding	100°C
最大碳刨深度 Max. depth of gouging	N/A	碳刨总长 Total length of gouging	N/A
焊工 welder	017858 2012/5	焊接类型 welding type	701W 1G
焊接电流 Current	280 A	焊接电压 Voltage	30V
		焊接速度 Speed	5/15mm/min
返修后检查 Inspection After repairing:			
外观检查 VT result	ACC	检验员 Inspector	C.M Chen 03110711
		日期 Date	2008.08.11
NDT复检 NDT result	WT ACC AUT ACC	探伤员 NDT person	XU Ronggang 08-08-13
		日期 Date	2008.08.12
见证: Witness/Review:			08-08-13
备注: Remark:			

#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	EP20	报告编号 Report No.	B-WR642
合同号 Contract No.:	04-0120F4	部件名称 Items Name	腹板EP20A Edge Plate	NDT报告编号 Report No.of NDT	
项目编号 Project No.:	ZP06-787				

### 焊缝缺陷描述:

#### Description of welding discontinuity:

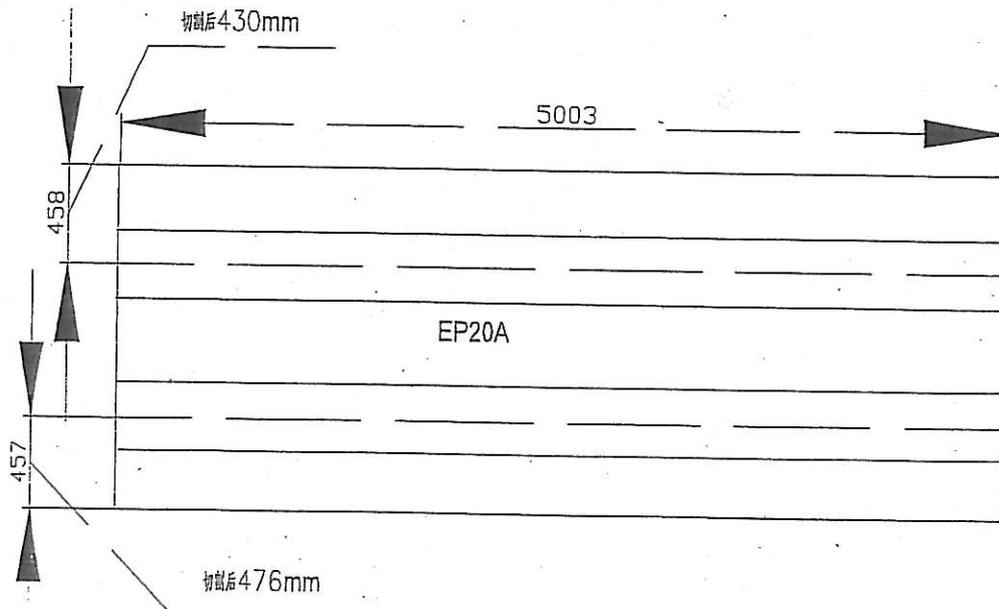
胡国兴施工队在切割4B-E角单元板EP20A一边余量时割短18mm, 具体见下图:

The EP20A of 4B-E corner section was cut more 18mm by Work Team: Hu Guoxing; the following shows the detail position.

检验员 (Inspector): Luan Zhaoqiang 日期(Date): 2008.07.29

### 焊缝返修位置示意图:

#### Draft of welding discontinuity:



产生原因:

Caused:

由于ACL线洋冲眼敲打有误差, 导致以洋冲眼为基准点划线切割余量后短18mm。

There is some error during fixing on ACL causing the cutting line offset 18mm.

车间负责人(Foreman): Li Dongliang

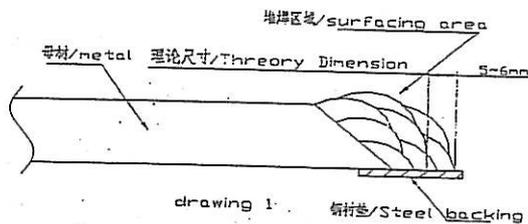
日期(Date): 2008-7-29

处理意见

Disposition:

1. 对需要修补的区域进行VT与MT检测;
2. 按照图一所示加钢衬垫;
3. 根据返修的焊接返修工艺规程(WPS)进行预热及焊接, 焊后尺寸要比实际尺寸大5-6mm;
4. 去除钢衬垫, 将修补焊缝打磨至与周围母材平齐;
5. 对返修区域做NDT(VT MT UT)以保证金属融合的深度;
6. 按照图纸要求重新进行切割。

附图形式:



1. Verify with VT and MT repair area is free of all defects.
2. Add ceramic backing according to the attached drawing 1;
3. Preheat and weld according to the relevant WPS and dimension of lineament is more than 5-6mm necessary actual dimension;
4. Remove the ceramic backing and grind the weld flush with around metal;
5. Perform post NDT (VT MT UT) of repaired area to insure sound weld metal has been deposited.
6. Prepare cutting again according to the shop drawings

工艺:  
Technical engineer NM Refay

审核:  
Approved by

Hufang

日期  
Date 2008.07.30



# 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.	EP20	报告编号 Report No.	B-WR642
合同号 Contract No.:	04-0120F4	部件名称 Items Name	腹板EP20A Edge Plate	NDT报告编号 Report No. of NDT	
项目编号 Project No.:	ZP06-787				

**纠正措施:**

1. 余量修割线划出后, 对照相应施工图纸认真检查, 质检确认无误后再进行余量修割。

1. Check cutting line according to the drawing by inspector before cutting.

车间负责人(Foreman): Li DongLiang

日期(Date): 2008-7-29

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	NM Refat 2008-07-30
返修(碳刨)前预热温度 Preheat temperature before gouging	NA	返修的缺陷 Description of discontinuity	NA
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	100°C
最大碳刨深度 Max. depth of gouging	NA	碳刨总长 Total length of gouging	NA
焊工 welder	047858 201/15	焊接类型 welding type	70M
焊接电流 Current	280A	焊接电压 Voltage	28.5V
		焊接位置 position	1G
		焊接速度 Speed	4.85mm/min

**返修后检查****Inspection After repairing:**

外观检查 VT result	Acc	检验员 Inspector	C.M Chen 03110711	日期 Date	2008.08.11
NDT复检 NDT result	WT Acc MT Acc	探伤员 NDT person	Xu Pengyong Cai Xinjin	日期 Date	2008-08-11 08-08-13
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 B787-UT-1767

DATE 2008.08.12

PAGE 1 OF 1

Revision No: 0

PROJECT NO.: 工程编号 ZP06-787

CONTRACTOR: CALTRANS

ITEMS NAME: OBG PLATE PANEL

DRAWING NO.: EP5B

CALTRANS CONTRACT NO.: 04-0120F4

部件名称 SPLICE

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

A578/A578M-2001

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

NA

Dec. 28<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

071565311, 061488510,

CALIBRATION BLOCK 试块

COUPLANT 耦合剂

MATERIAL/THICKNESS 材料厚度

1/2S IIW BLOCK TYPE II

C.M.C

A709M-345F2-X

20mm

### 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							
1		69.0				33									ACC.

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EXAMINED BY 主探  
Xu Ronggang 2008.08.12

REVIEWED BY 审核  
Mao Jizhong 2008.08.12

LEVEL - II SIGN / DATE  
质量经理 / QCM Hu Kang 2008.08.20

LEVEL - II SIGN / DATE  
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-1766      DATE 2008.08.12      PAGE 1 OF 1      Revision No: 0

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

ITEMS NAME: OBG PLATE PANEL      DRAWING NO.: EP20A      CALTRANS CONTRACT NO.: 04-0120F4  
 部件名称 SPLICE      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      A678/A578M-2001      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      NA      Dec. 28<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      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-345F2-X      20mm

### 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			
1		69.0				33										ACC.

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EXAMINED BY 主探: Xu Ronggang 2008.08.12      REVIEWED BY 审核: Majitong 2008.08.12  
 LEVEL - II SIGN / DATE      LEVEL - II SIGN / DATE

质量经理 / QCM: Hutiang 2008.08.20      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-2829      DATE日期 2008.08.13      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: EP5B OBG CORNER ASSEMBLY      CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4

REFERENCING CODE 参考规范编码: AWS D1.5-2002      ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002      PROCEDURE NO. 程序编号: ZPQC-MT-01      CALIBRATION DUE DATE 仪器校正有效期: Dec. 28<sup>ST</sup>, 2008

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-345F2-X 20mm

WELDING PROCESS 焊接方法: FCAW      TYPE OF JOINT 焊缝类型: N/A

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			
EP5				ACC.		MATERIAL REPAIRING

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EXAMINED BY 主操: Cai Xin Lin      REVIEWED BY 审核: Wang Wei      08.08.13

LEVEL - II SIGN 签名 / DATE 日期: 08.08.13      LEVEL-II SIGN / DATE 日期

质量经理 / QCM      用户 CUSTOMER

签字 SIGN / 日期 DATE      签字 SIGN / 日期 DATE



**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, PRC**Report No:** NCS-000109**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 11-Nov-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0155**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:** 03-Jul-2008**Description of Non-Conformance:**

The Contractor performed critical weld repair on SPCM material without Engineer approval. The Contractor corrected the length of edge panels by building up with weld metal to an approximate length of 20mm without prior Engineer approval. The maximum allowable thickness of weld to be deposited is 4.5mm for edge plates with nominal thickness of 18mm. This occurred on edge panels EP017 and EP005.

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

The Contractor acknowledges the violation of contract and will follow AWS D1.5 Section 12.17.2 (7) when building up SPCM material in future (this is non-critical repair buttering up to 10mm or 1/4T).

**Corrective action taken:**

Closed by Construction.

**Did corrective action require Engineer's approval?** Yes No**If so, name of Engineer providing approval:** Stanley Ku and Doug Wright**Date:** 11-Nov-2008**Is Engineer's approval attached?** Yes No Email on file.**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 Sang Le, who represents the Office of Structural Materials for your project.

**Inspected By:** Dautermann, Peter

Quality Assurance Inspector

**Reviewed By:** Dautermann, Peter

QA Reviewer