

**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-000724**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0687**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> OBG Segment 7CW/7DW Side and Bottom Panel
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Improper procedures in welding in 7CW/7DW Side and Bottom Panel without a CWR

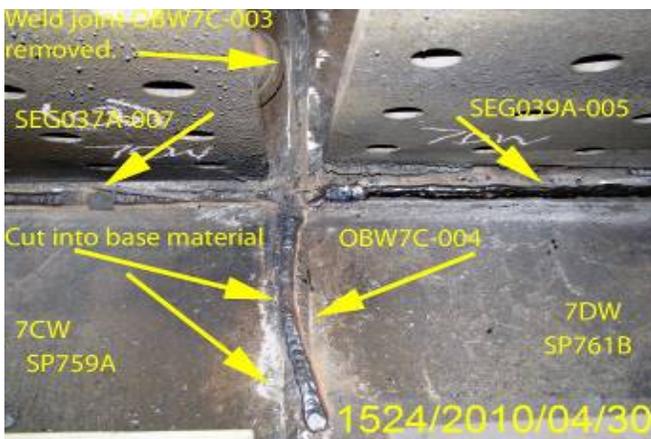
**Description of Non-Conformance:**

During random in process observation of the Trial Assembly of OBG segment 7CW and 7DW, this Quality Assurance (QA) Inspector discovered the following issues:

- ZPMC welding personnel cut apart weld joints and performed Critical Weld Repair (CWR) welding on Seismic Performance Critical Members (SPCM) without an approved CWR procedure.
- In the welding of joint OBW7C-004, a section of the weld has been unzipped and rewelded. It was noted that the cut and repaired base metal was partially in the base metal of SP761B and BP146A.
- It appeared that the surfaces to be welded had not been properly cleaned, beveled or prepared prior to the weld repairs. The original welds had not been completely removed and the burn slag (dross) was still visible.
- The weld joints that were cut apart to adjust for a misalignment are identified as: SEG037A-007, SEG039A-005, OBW7C-003 and OBW7C-004.
- These weld joints are Complete Joint Penetration (CJP) welds.
- Bottom Panel identified as BP145A is joined to the Side Panel identified as SP759A for 7CW.
- Bottom Panel identified as BP146A is joined to the Side Panel identified as SP761A for 7DW.
- BP145A and SP759A are designated as non Seismic Performance Critical Members (non SPCM).
- BP146A and SP761A are designated as Seismic Performance Critical Members (SPCM).
- Location of these welds is near panel point (PP) 55 on the Cross Beam side at the W4 line.
- Segment 7CW&7DW are located in the OBG Trial Assembly Area.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )



## Applicable reference:

AWS D1.5-2002 Section 3.7.5; The Engineer shall be notified before improperly fitted and welded members are cut apart.

AWS D1.5-2002 Section 6.3.1; The inspector shall make certain that all WPS's are qualified in conformance with Section 5 of this code. The inspector shall make certain that each welding operation is covered by a written WPS and that such WPS's are available to the welders and inspectors for reference.

AWS D1.5-2002 Section 12.17.3 Critical Weld Repairs. Except as provided in 12.17.2, all welded repairs shall be considered critical. They include, but are not limited to the following:

- (5) Corrections requiring weld removal and rewelding except as provided in 12.17.2(4).
- (6) All welding to correct errors in fabrication such as improper cutting, punching, drilling, machining, assembly, etc.

AWS D1.5-2002 Section 3.2.1 Surfaces and edges to be welded shall be smooth, uniform, and free from fins, tears, cracks, and other discontinuities which would adversely affect the quality or strength of the weld. Surfaces to be welded and surfaces adjacent to a weld shall also be free from loose or thick scale, slag, rust, moisture, grease, and other foreign material that would prevent proper welding or produce objectionable fumes.

**Who discovered the problem:** Joe Alaniz

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Name of individual from Contractor notified:** CK Chan

**Time and method of notification:** 1600 hours, 04-30-10, Verbal

**Name of Caltrans Engineer notified:** Stanley Ku

**Time and method of notification:** 1030 hours, 05/02/10, Verbal

**QC Inspector's Name:** Wang Lu

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

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

N/A

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Tsang, Eric	SMR
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<b>Reviewed By:</b>	Wahbeh, Mazen	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:** 03-May-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:** 05.03.06-000682

**Subject:** NCR No. ZPMC-0687

**Reference Description:** Improper procedures in welding in 7CW/7DW Side and Bottom Panel without a CWR

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:**

During random in process observation of the Trial Assembly of OBG segment 7CW and 7DW, this Quality Assurance (QA) Inspector discovered the following issues:

- ZPMC welding personnel cut apart weld joints and performed Critical Weld Repair (CWR) welding on Seismic Performance Critical Members (SPCM) without an approved CWR procedure.
- In the welding of joint OBW7C-004, a section of the weld has been unzipped and rewelded. It was noted that the cut and repaired base metal was partially in the base metal of SP761B and BP146A.
- It appeared that the surfaces to be welded had not been properly cleaned, beveled or prepared prior to the weld repairs. The original welds had not been completely removed and the burn slag (dross) was still visible.
- The weld joints that were cut apart to adjust for a misalignment are identified as: SEG037A-007, SEG039A-005, OBW7C-003 and OBW7C-004.
- These weld joints are Complete Joint Penetration (CJP) welds.
- Bottom Panel identified as BP145A is joined to the Side Panel identified as SP759A for 7CW.
- Bottom Panel identified as BP146A is joined to the Side Panel identified as SP761A for 7DW.
- BP145A and SP759A are designated as non Seismic Performance Critical Members (non SPCM).
- BP146A and SP761A are designated as Seismic Performance Critical Members (SPCM).
- Location of these welds is near panel point (PP) 55 on the Cross Beam side at the W4 line.
- Segment 7CW&7DW are located in the OGB Trial Assembly Area.

**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.

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# NCT

( Continued Page 2 of 2 )

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**Transmitted by:** Sean Eagen      Transportation Engineer

**Attachments:**    ZPMC-0687

**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:** 05.03.06-000682

**Subject:** NCR No. ZPMC-0687

**Dated:** 10-Jun-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000690 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC will provide NDT to show these welds are acceptable after the repairs are complete. Based on this proposal ZPMC requests that this NCR be approved, with actions pending.

ZPMC will provide NDT to show these welds are acceptable after the repairs are complete. Based on this proposal ZPMC requests that this NCR be approved, with actions pending.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000690R00

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**Caltrans' comments:**

**Status:** REJ

**Date:** 14-Jun-2010

Joint preparation was a significant issue related to the issuance of this NCR. Please provide a means of addressing this issue and ensuring that this type of non-conformance does not occur in the future.

**Submitted by:** Eagen, Sean

**Date:** 14-Jun-2010

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000682

**Subject:** NCR No. ZPMC-0687

**Dated:** 07-Jul-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000690 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** To resolve the NCR, ZPMC has removed the welds, re-welded and tested them and found them acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has written an internal NCR to document and reprimand the QC department for this NCR., in the future the QC department will give great attention to the interpass cleaning when observing welding. To resolve the NCR, ZPMC has removed the welds, re-welded and tested them and found them acceptable. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000690R01;

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### Caltrans' comments:

**Status:** CLO

**Date:** 13-Jul-2010

The corrective action and preventive measures taken by the Contractor are acceptable. This NCR is considered closed.

**Submitted by:** Woo, Laraine

**Date:** 13-Jul-2010

**Attachment(s):**



No. B-813

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-07-07**

**REGARDING: NCR-000724(ZPMC-0687)**

ZPMC QA personnel have written an internal NCR to address this issue. These welds were cut off to adjust the misalignments between 7DW/7CW at the corner of BP/SP. ZPMC is providing the WRR and NDT records show these locations are now acceptable. ZPMC QA personnel have instructed the QC/CWI that proper cleaning should be performed prior to any welding. ZPMC will enhance the welding control to prevent the same issue from occurring again. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

N CR-000724(ZPMC-0687)

B-WR12774

B787-UT-13593

B787-MT-24538

*Log w*  
*7/7/10*



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 Date: 03-May-2010  
 375 BURMA ROAD Contract No: 04-0120F4  
 OAKLAND CA 95607 04-SF-80-13.2 / 13.9  
 Dear: Mr. Charles Kanapicki Job Name: SAS Superstructure  
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager Document No: 05.03.06-000682  
 Subject: NCR No. ZPMC-0687

Reference Description: Improper procedures in welding in 7CW/7DW Side and Bottom Panel without a CWR

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- Non-Conformance Resolved.

Material Location: OBG Lift: 07

**Remarks:**

During random in process observation of the Trial Assembly of OBG segment 7CW and 7DW, this Quality Assurance (QA) Inspector discovered the following issues:

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02.02.15.04  
 05.03.06-000682.NCT

Received  
 NCT-000682 03 May 10 Page 1 of 2

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NCT

( Continued Page 2 of 2 )

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Transmitted by: Sean Eagen      Transportation Engineer

Attachments:    ZPMC-0687

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

Contract #: 04-0120F4

Cty: SF/ALA Rtc: 80 PM: 13.2/13.9

File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000724

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 30-Apr-2010

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

NCR #: ZPMC-0687

### Type of problem:

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: OBG Segment 7CW/7DW Side and Bottom Panel  
 Procedural  Procedural  Description:

Reference Description: Improper procedures in welding in 7CW/7DW Side and Bottom Panel without a CWR

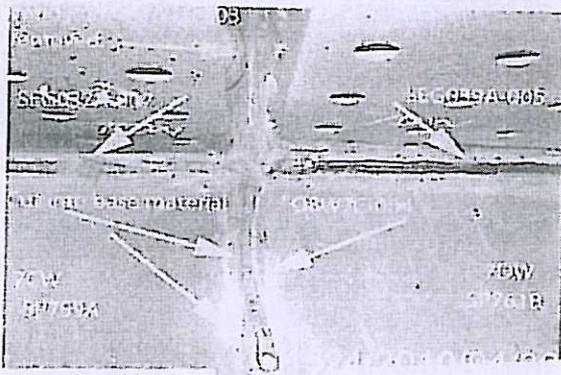
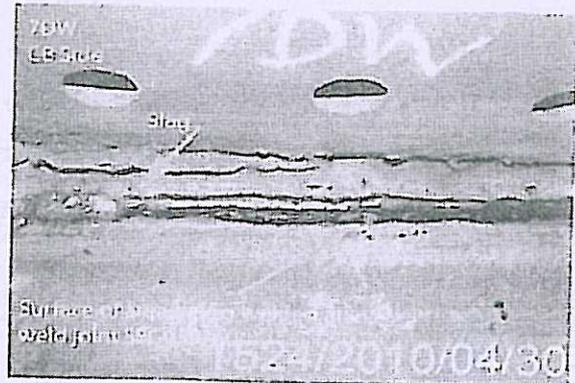
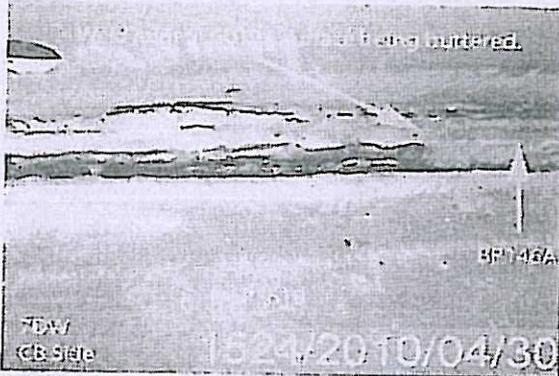
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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



### Applicable reference:

AWS D1.5-2002 Section 3.7.5; The Engineer shall be notified before improperly fitted and welded members are cut apart.

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Who discovered the problem: Joe Alaniz

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 3 of 3 )

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Name of individual from Contractor notified: CK Chan  
Time and method of notification: 1600 hours, 04-30-10, Verbal  
Name of Caltrans Engineer notified: Stanley Ku  
Time and method of notification: 1030 hours, 05/02/10, Verbal  
QC Inspector's Name: Wang Lu  
Was QC Inspector aware of the problem:  Yes  No  
Contractor's proposal to correct the problem:

N/A

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Tsang, Eric	SMR
Reviewed By:	Wahbeh, Mazen	SMR

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# 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	SEG037A+SEG039A	报告编号 Report No.	B-WR12774
合同号 Contract No.:	04-0120F4	部件名称 Items Name	箱梁 BOX	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

### 焊缝缺陷描述:

#### Description of welding discontinuity:

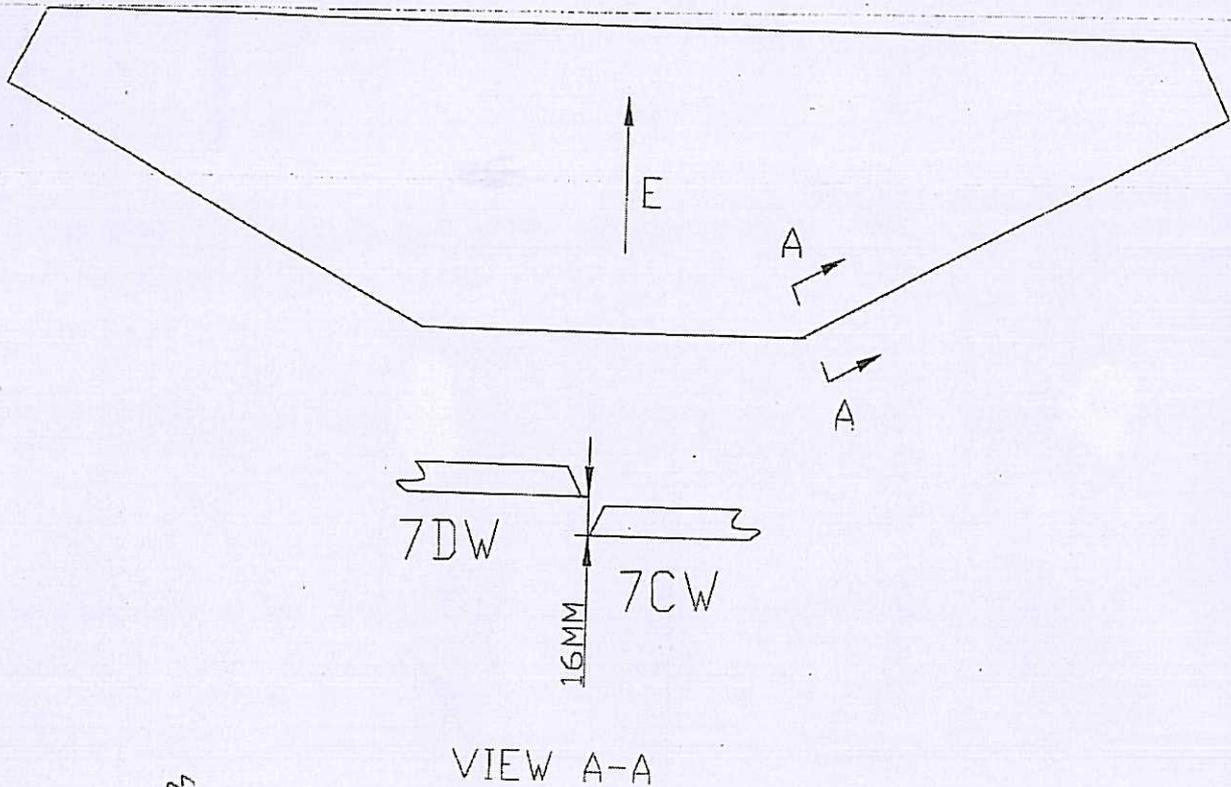
7CW+7DW端口环缝, T肋对接焊接结束后, 测量联系梁侧底板斜底板拐角的错边量, 发现数据超标, 最大达16mm。  
(可能涉及的焊缝OBW7C-004, SEG037A-007, SEG039A-005; SP759-001-044, SP759-001-054)

After T ribs on 7DW and 7CW were butted together, it was found that corners between bottom plate and side plate have misalignments, the largest of which is 16mm in length.

检验员 (Inspector): shazhi 日期(Date): 2010.05.09

### 焊缝返修位置示意图:

Draft of welding discontinuity



26413  
1697

产生原因:

Caused:

焊接变形与装配位差

Welding deformation and assembly error.

车间负责人(Foreman) *Zhang Yide* 日期(Date): *2010.5.12*

处理意见

Disposition:

1. 采用碳刨或火焰切割的方法割除平整度超差位置纵桁与底板的角度焊缝长度L, 后割开相应位置的斜底板与底板拐角处的主焊缝(注: L、L'切割长度可根据现场实际平整度超差情况进行确定), 碳刨前应根据相应的WPS进行预热;
2. 采用外力调整对接错边量以满足公差要求, 并固定住底板与斜底板以保证平面度满足公差要求;
3. 对底板母材刨除区域进行VT与MT检测确认无缺陷存在;
4. 根据批准的返修WPS焊接底板与斜底板焊缝, 并随时检测底板与斜底板平整度, 其次焊接纵桁与箱梁底板焊缝;
5. 焊接前纵桁底板边缘若损伤需根据返修WPS进行修补并做相应的NDT检测;
6. 将焊缝打磨与周边焊缝或母材平齐;
7. 根据图纸要求进行检测。

1. Remove the welds where the straightness is out of tolerance between LD and bottom plate by the way of gouging or Oxygen, then the weld between side plate and bottom plate with length of L (The L, L' length is confirm by actual condition), Preheat according to the WPS prior to gouging.
2. Adjust the misalignment and the straightness to meet the tolerance by outer force and ensure the straightness to meet the tolerance.
3. Perform 100%VT and MT inspection to the metal cutting area in the bottom plate to ensure no defects exist;
4. Fit up and weld LD the weld between side plate and bottom plate according to the relevant WPS with check the flatness sometime, and then weld the welding line between LD and side plate;
5. Repair and perform related NDT inspection according to the repair WPS if the edge of LD was destroyed.
6. Grind the weld flush to the adjacent weld or base metal.
7. Check the weld according to the shop drawings.

工艺: *H. Xiaolu*  
Technical engineer

审核:  
Approved by

日期: *2010.5.12*  
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	SEG037A+SEG03 9A	报告编号 Report No.	B-WR12774
合同号 Contract No.:	04-0120F4	部件名称 Items Name	箱梁 BOX	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:

控制焊接质量, 减少装配误差。

Control the welding quality so as to reduce the assembly error.

车间负责人(Foreman): *Shangyida* 日期(Date): 2010-5-12

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1 WPS-345-SMAW-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1 WPS-345-SMAW-3 G(3F)-Repair WPS-345-SMAW-4 G(4F)-Repair	工艺员 technologist	<i>Hedding</i> 5-12-01 Welding deformation
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返修(碳刨)前预热温度 Preheat temperature before gouging	87°C	返修的缺陷 Description of discontinuity	焊接变形
焊前处理检查 Inspection before welding	ALL	焊前预热温度 Preheat temperature before welding	189°C
最大碳刨深度 Max. depth of gouging	10mm	碳刨总长 Total length of gouging	600mm

焊工 welder	<i>045196</i>	焊接类型 welding type	<i>SMAW</i>	焊接位置 position	<i>49</i>
焊接电流 Current	<i>150</i>	焊接电压 Voltage	<i>25</i>	焊接速度 Speed	<i>99</i>

返修后检查 Inspection After repairing:		
外观检查 VT result	检验员 Inspector <i>Washicheng</i>	日期 Date
NDT复检 NDT result	探伤员 NDT person <i>Tanyingshan</i>	日期 Date

见证:  
Witness/Review:

备注:  
Remark:



# REPORT OF ULTRASONIC EXAMINATION

## UT探伤报告

REPORT NO. 报告编号 B787-UT-13593      DATE 2010.06.24      PAGE 1 OF 1      Revision No: 0

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

ITEMS NAME: SIDE PLATE AND BOTTOM PLATE      DRAWING NO.: 7CW+7DW      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  
 SMAW      BUTT CORNER-JOINT      Dec. 28<sup>ST</sup>, 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-345      18/20/10mm

### 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	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
OBW7C-004		70												ACC.	100%
SEG037A-007		70												ACC.	100%
SEG039A-005		70												ACC.	100%
SP759-001-044		70												ACC.	100%
SP759-001-054		70												ACC.	100%
OBW7C-003		70												ACC.	100%

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EXAMINED BY 主探 <i>Tanyu</i> LEVEL - II SIGN / DATE      12.06.24	REVIEWED BY 审核 <i>Xin Ren-guang</i> LEVEL - II SIGN / DATE      12.06.24
质量经理 / QCM  签字 SIGN / 日期 DATE	用户 CUSTOMER  签字 SIGN / 日期 DATE



**REPORT OF MAGNETIC PARTICLE EXAMINATION**  
磁粉检测报告

REPORT NO. 报告编号 B787-MT-24538		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: 7CW+7DW PLATE PANEL SPLICE		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> , 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-345  18/10/20mm	
WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	BUTT/CORNER JOINT	

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
OBW7C-004				ACC.		100%MT
SEG037A-007				ACC.		100%MT
SEG039A-005				ACC.		100%MT
SP759-001-044				ACC.		100%MT
SP759-001-054				ACC.		100%MT
AFTER B-WR12774						
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EXAMINED BY主操 Wang Wei <i>Wang Wei</i> LEVEL - II SIGN 签名 / DATE日期 2010.06.28	REVIEWED BY 审核 <i>Fu Zhijiang</i> LEVEL-II SIGN / DATE日期 2010.06.28
质量经理 / QCM	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000708**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0687**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>Description:</b>	

**Date the Non-Conformance Report was written:** 30-Apr-2010**Description of Non-Conformance:**

During random in process observation of the Trial Assembly of OBG segment 7CW and 7DW, this Quality Assurance (QA) Inspector discovered the following issues:

- ZPMC welding personnel cut apart weld joints and performed Critical Weld Repair (CWR) welding on Seismic Performance Critical Members (SPCM) without an approved CWR procedure.
- In the welding of joint OBW7C-004, a section of the weld has been unzipped and rewelded. It was noted that the cut and repaired base metal was partially in the base metal of SP761B and BP146A.
- It appeared that the surfaces to be welded had not been properly cleaned, beveled or prepared prior to the weld repairs. The original welds had not been completely removed and the burn slag (dross) was still visible.
- The weld joints that were cut apart to adjust for a misalignment are identified as: SEG037A-007, SEG039A-005, OBW7C-003 and OBW7C-004.
- These weld joints are Complete Joint Penetration (CJP) welds.
- Bottom Panel identified as BP145A is joined to the Side Panel identified as SP759A for 7CW.
- Bottom Panel identified as BP146A is joined to the Side Panel identified as SP761A for 7DW.
- BP145A and SP759A are designated as non Seismic Performance Critical Members (non SPCM).
- BP146A and SP761A are designated as Seismic Performance Critical Members (SPCM).
- Location of these welds is near panel point (PP) 55 on the Cross Beam side at the W4 line.
- Segment 7CW&7DW are located in the OGB Trial Assembly Area.

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

Remove and replace welds in question.

**Corrective action taken:**

Welds were removed and replaced, and the Contractor submitted NDT data verifying the welds conform with Contract weld quality requirements. An internal NCR was also issued by ZPMC in regards to this matter.

**Did corrective action require Engineer's approval?**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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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.

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**Inspected By:**    Simonis,Jim

Quality Assurance Inspector

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**Reviewed By:**    Wahbeh,Mazen

QA Reviewer