

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-000653**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0624**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment 7EW FB to LD Weld
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: An UT indication (in 7EW FB to LD Weld) found by QA verification at the location where the contractor has tested and accepted

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7EW, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +7.
- Material thickness is 14mm.
- The depth of the indication is approximately 5mm.
- The weld is identified as SEG041C-013 and located at Panel Point PP59 Cross Beam Side.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 230mm from top.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining Longitudinal diaphragm plate (Non SPCM) to Floor Beam Plate X48B (Non SPCM).
- The Notice of Witness Inspection (NWIT) No. is 005120. The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform twenty five (25%) percent UT inspection of this weld.

Applicable reference:

-AWS D1.5-02 Section 6; Table 6.3 specifies a class A indication as having a rating of 10dBs and under for material thicknesses 8mm through 20mm.

-Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1830 hours, 01-25-10, Email

Name of Caltrans Engineer notified: Bill Howe, Ching Chao

Time and method of notification: 1330 hours, 01-26-10, Verbal

QC Inspector's Name: Zhong Wei

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
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Reviewed By:	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:	26-Jan-2010
Dear:	Mr. Charles Kanapicki	Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Job Name:	SAS Superstructure
Subject:	NCR No. ZPMC-0624	Document No:	05.03.06-000612

Reference Description: An UT indication (in 7EW FB to LD Weld) found by QA verification at the location where the contractor has tested and accepted

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 the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7EW, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +7.
- Material thickness is 14mm.
- The depth of the indication is approximately 5mm.
- The weld is identified as SEG041C-013 and located at Panel Point PP59 Cross Beam Side.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 230mm from top.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining Longitudinal diaphragm plate (Non SPCM) to Floor Beam Plate X48B (Non SPCM).
- The Notice of Witness Inspection (NWIT) No. is 005120. The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform twenty five (25%) percent UT inspection of this weld.

Please see attached NCR ZPMC-624 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues with revised procedures to remedy the defected work and to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao

NCT

(Continued Page 2 of 2)

Attachments: ZPMC-0624

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000612

Subject: NCR No. ZPMC-0624

Dated: 08-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000570 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: The ABFJV QCM has instituted training sessions for ZPMC inspectors. In addition to training, ABF has purchased new equipment to standardize both ABF and ZPMC with the equipment used by Caltrans.

ZPMC and ABFJV have taken steps to reduce the number of both MT and UT missed indications. The ABFJV QCM has instituted training sessions for ZPMC inspectors to reinforce key points of performing UT and MT, the most recent was held in December 2009. The ZPMC Level III has conducted training with the inspectors as well. In addition to training, ABF has purchased new equipment to standardize both ABF and ZPMC with the equipment used by Caltrans. Examples of this are the powder bulbs with magnetic caps, and the same transducers used by Caltrans. Documents of the acceptable NDT will be provided when they are available at a later date. Based on this ZPMC requests that this NCR be approved with actions pending.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000570R00;

Caltrans' comments:

Status: AAP

Date: 08-Feb-2010

AAP approved.

Submitted by: Howe, Bill

Date: 08-Feb-2010

Attachment(s):

Tool Box Training Agenda

Subject: MT Techniques

Reason for Training: Several CT NCR's of indications missed during ZPMC NDT inspection.

1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical shock

2. Tools

- a. Lighting
- b. MT Powder. Red for ambient, Yellow for High Temperature.
- c. Powder Bulb
- d. Powder Blower
- e. MT Yoke Adequate working condition
- f. Pie Gage

3. Inspection Techniques

- a. Lighting
- b. Position of body (distance of eyes to the weld surface)
- c. Application of Powder removal of Powder
- d. Continuous method
- e. Two directions
- f. Both sides of weld
- g. Clean and dry surface



教育培训纪录

培训编号: MT-22-Dec-09

培训内容:	MT Techniques
培训对象:	项目质检
授课人员:	Steve Lawton
培训类型:	内部培训
培训时间:	22-Dec-09 5:00 PM
计划培训地点:	ZPMC QC office

人员签到:

姓名	部门	姓名	部门
孙力杰 Sunlei	钢桥	狄坤伦 Di Kunlun	钢桥
孙功成 Sun Gongcheng	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Zhongqiang	钢桥
卜源源 Bian Yuan Yuan	钢桥	顾云武 Gu Yunwu	钢桥
许兵 Xu Bing	钢桥	金建廷 Jin Jianting	钢桥 MT
李振华 Li Zhenhua	钢桥	常方杰 Chang Fangjie	钢桥
李坤阳 Li Xunyang	QA	袁俊 Yuan Jun	钢桥
王威 Wang Wei	钢桥	刘章敏 Liu Zhangmin	
施林 Shi Lin	钢桥 MT	徐华祥 Xu Huaxiang	钢桥
丁阿成 Ding A Cheng	钢桥 MT	周东超 Zhou Dongchao	钢桥
贺佳佳 He Jiajia	钢桥	赵成功 Zhao Cheng Gong	钢桥
黄瑞 Huang Rui	钢桥	孙工 Sun Gongcheng	钢桥
李黎明 Li Liming	钢桥	徐晖 Xu Hui	钢桥
李昌涛 Li Changtao		刘宏斌 Liu Hongbin	



教育培训纪录

培训编号:

培训内容:	UT复习培训教程 UT Techniques
培训对象:	ZPMC UT GUYS
授课人员:	STEVE LAWTON
培训类型:	UT Refresher Training Agenda
培训时间:	2009. 12. 24. 16:30
计划培训地点:	ZPMC NDT OFFICE

人员签到:

姓名	部门	姓名	部门
戴斌 Dai Gouf shou	江江 Jiang Jiang		
薛宇 Xuellanong	黄廷 Huang Ting		
马志长 Majzhang	黄廷 Huang Ting		
谭善 Tanxingshan	李黎明 Li Liming		
马建 Ma Jian	李黎明 Li Liming		
王福 Wangfu	徐坤 Xu Kun		
沈健 Sheng Jian	李黎明 Li Liming		
黄宇 Huang Yu			
金峰 Jin Feng			
吴文 Wu Wen			
解坤 Jie Kun			
周海周 Zhou Hai Zhou			
徐坤 Xu Kun			

UT Refresher Training Agenda

Subject: UT Techniques

Reason for Training: Several CT NCR's for missed UT indications

1. **Safety**
 - a. Safety Glasses
 - b. Gloves (if required)
 - c. Knee Pads
 - d. Electrical Shock

2. **Tools**
 - a. Calibrated UT Machine condition of machine
 - b. Coaxial cable condition of cable
 - c. Transducer condition of transducer
 - d. IIW Block
 - e. Scraper
 - f. UT couplant

3. **Inspection Techniques**
 - a. Surface preparation
 - b. Location of weld UT from beveled plate
 - c. Scanning patterns
 - d. Correct choice of Angles
 - e. Calibration per ZPMC procedure at regular intervals
 - f. Scanning speed
 - g. Know where your sound is at.... First leg, second leg etc...

4. **Inspection Criteria**
 - a. Table 6.3 or Table 6.4
 - b. Are surface inspections complete VT and or MT should always occur before UT
 - c. Scanning Levels
 - d. Criteria dictated by the thinner of the two members
 - e. Planar flaws

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000612

Subject: NCR No. ZPMC-0624

Dated: 24-May-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000570 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indications and is providing the NDT records to show that the weld is acceptable. Based on this ZPMC requests closure of this NCR..

ZPMC has repaired the missed indications and is providing the NDT records to show that the weld is acceptable. The weld ID identified in the NCR is incorrect and ZPMC is submitting NDT reports with the correct weld ID. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000570R01;

Caltrans' comments:

Status: CLO
Date: 30-May-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0624 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 30-May-2010



No. B-741

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-5-1

**REGARDING: NCR-000547(ZPMC-0520), NCR-000581(ZPMC-0554)
NCR-000588(ZPMC-0561), NCR-000653 (ZPMC-0624)**

NCR-000547(ZPMC-0520) & NCR-000581(ZPMC-0554)

ZPMC is providing the WRRs and NDT records show these missed indications have been repaired and retest to be acceptable. ZPMC is requesting closure of these NCRs.

NCR-000588(ZPMC-0561)

ZPMC is providing the NDT record shows these missed indications have been repaired and retest to be acceptable. Please be noticed the corrected weld IDs should be CSD5-PP67-025 & CSD5-PP67-051. For detail please look at B-CWR1035. ZPMC is requesting closure of this NCR.

NCR-000653 (ZPMC-0624)

ZPMC is providing the NDT record shows this missed indication has been repaired and retest to be acceptable. Please be noticed the corrected weld IDs should be CA051-008. For detail please look at B-CWR1036. ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000547(ZPMC-0520)

B-WR12122

B787-UT-12336 R1

NCR-000581(ZPMC-0554)

B-WR12123

B787-UT-12337 R1

NCR-000588(ZPMC-0561)

B787-MT-16598 R1

NCR-000653 (ZPMC-0624)

B787-MT-16620 R1

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

5/1/10



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 24-Dec-2009

Contract No: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No: 05.03.06-000508

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Subject: NCR No. ZPMC-0520

Reference Description: Missed UT Indication by QC, Segment 7CW

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:

Remarks:

During the Quality Assurance Ultrasonic Testing (UT) review of weld located on OBG Segment 7CW, this Quality Assurance Inspector (QA) discovered the following issue:

-A total of one (1) rejectable Class "A" indication measuring approximately 25mm in length.

-The Weld is a complete joint penetration (CJP) Butt Weld joining Side Plate SP99A to SP431A and is identified as SEG37A-001.

-The Segment is located in the repair yard north of the blast shop.

The Notice of Witness Inspection Number (NWI) is 004866. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% (UT) inspection of this splice weld.

Action Required and/or Action Taken

Submit a repair plan to the engineer for approval. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0520

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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, P.R. China
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island
Report No: NCR-000547
Date: 15-Dec-2009
NCR #: ZPMC-0520

Type of problem:

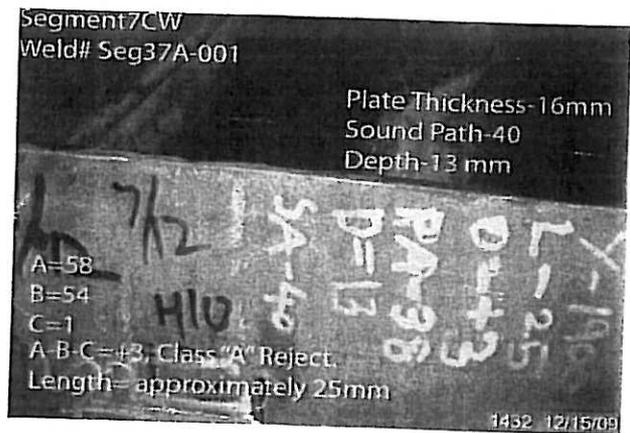
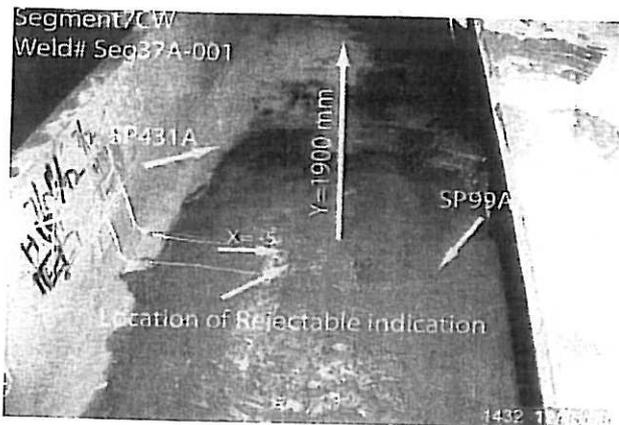
- Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** OBG Segment 7CW
 Procedural Procedural Description:

Reference Description: Missed UT Indication by QC, Segment 7CW

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of weld located on OBG Segment 7CW, this Quality Assurance Inspector (QA) discovered the following issue:

- A total of one (1) rejectable Class "A" indication measuring approximately 25mm in length.
 - The Weld is a complete joint penetration (CJP) Butt Weld joining Side Plate SP99A to SP431A and is identified as SEG37A-001.
 - The Segment is located in the repair yard north of the blast shop.
- The Notice of Witness Inspection Number (NWIT) is 004866. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% (UT) inspection of this splice weld.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 Section 6.26.3.1; "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4."

Who discovered the problem: Hiranah Patel

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1700 hours, 12/15/09, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1330 hours, 12/17/09, Verbal

QC Inspector's Name: Zhang Wei

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 Eric Tsang, 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR



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	SEG037A	报告编号 Report No.	B-WR12122
合同号 Contract No.	04-0120F4	部件名称 Items Name	7CW BOTTOM AND SIDE PLATE LATE SPLICE	NDT报告编号 Report No. of NDT	B787-UT-12336
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

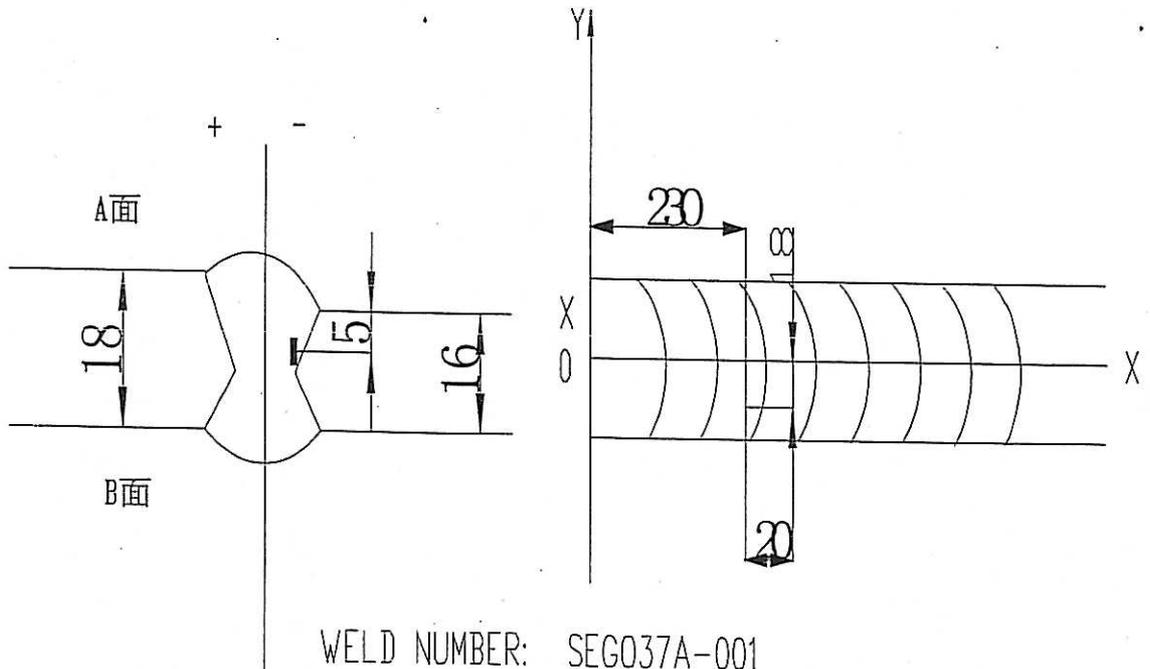
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG037A-001

检验员 (Inspector) Jin Feng 日期(Date): 2010.04.15

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

1、焊道未及时处理干净。

1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *li Zhigang* 日期(Date): 4. 18

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D 为缺陷深度, T 为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;

2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;

3. 焊前对修补区域进行VT检测保证缺陷完全被清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 对焊缝进行UT检测, 检测范围为返修区域以及其两端各延长50mm。

1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, " D " is depth of defects, " T " is thickness of metal) to remove all defects;

2. Follow repair WPS for joint preparation, preheat, and weld deposit;

3. Verify with VT no defects remain in the weld joint prior to welding;

4. Grind the repaired area flush with base metal or the adjacent weld;

5. Perform UT inspection to the weld along with 50mm on each end of the repair area;

工艺: *hexiaolin*
Technical engineer

审核:
Approved by

日期 10-4.18
Date



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	SEG037A	报告编号 Report No.	B-WR12122
合同号 Contract No.:	04-0120F4	部件名称 Items Name	7CW BOTTOM AND SIDE PLATE SPLICE	NDT报告编号 Report No. of NDT	B787-UT-12336
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): *Li Zhigang* 日期(Date): *4.18*

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-4 G(4F)-Repair	工艺员 technologist	<i>Hexinshu</i> <i>4.18</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>850°C</i>	返修的缺陷 Description of discontinuity	<i>Z-F</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>126°C</i>
最大碳刨深度 Max. depth of gouging	<i>7mm</i>	碳刨总长 Total length of gouging	<i>120mm</i>
焊工 welder	<i>045133</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>168</i>	焊接电压 Voltage	<i>25-3</i>
		焊接位置 position	<i>1G</i>
		焊接速度 Speed	<i>152</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>0710701</i>
		日期 Date	<i>2010.4.22</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>6-panhua</i>
		日期 Date	<i>10.4.27</i>
见证: Witness/Review:			
备注: Remark:			



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-12336		DATE 2010.04.15	PAGE 1 OF 1	Revision No: 0
PROJECT NO.: 工程编号 ZP06-787			CONTRACTOR: CALTRANS	
ITEMS NAME: 7CW BOTTOM PLATE AND SIDE PLATE SPLICE 部件名称	DRAWING NO.: SEG037A 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 SMAW	JOINT TYPE 焊缝类型 BUTT	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010		
EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 071565311, 061488510, 061495811, 070152011,	
CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 16/18mm		

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		
SEG037A-001	1	70	A	2	44	32	5	+7	20	86	5	-18	230	REJ.	100%
BLANK															

EXAMINED BY 主探 <i>Jinfeng 10.04.15</i>	REVIEWED BY 审核 <i>Hanben 10.04.15</i>
LEVEL - II SIGN / DATE	LEVEL - II SIGN / DATE
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-12336R1 DATE 2010.04.27 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 7CW BOTTOM PLATE AND SIDE PLATE SPLICE DRAWING NO.: SEG037A 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 Dec. 28ST, 2010

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

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-345T2-X 16/18mm

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			
SEG037A-001	1R1	70				32									ACC.	100%

AFTER B-WR12122

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EXAMINED BY 主探 LEVEL - II SIGN / DATE 10.04.27 质量经理 / QCM 签字 SIGN / 日期 DATE	REVIEWED BY 审核 LEVEL - II SIGN / DATE 10.04.27 用户 CUSTOMER 签字 SIGN / 日期 DATE
--	---



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: 26-Jan-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: 05.03.06-000612

Subject: NCR No. ZPMC-0624

Reference Description: An UT indication (in 7EW FB to LD Weld) found by QA verification at the location where the contractor has tested and accepted

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 the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7EW, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +7.
- Material thickness is 14mm.
- The depth of the indication is approximately 5mm.
- The weld is identified as SEG041C-013 and located at Panel Point PP59 Cross Beam Side.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 230mm from top.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining Longitudinal diaphragm plate (Non SPCM) to Floor Beam Plate X48B (Non SPCM).
- The Notice of Witness Inspection (NWIT) No. is 005120. The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform twenty five (25%) percent UT inspection of this weld.

Please see attached NCR ZPMC-624 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues with revised procedures to remedy the defected work and to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao

NCT

(Continued Page 2 of 2)

Attachments: ZPMC-0624

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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 #: 04-0120F4Cty: 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-000653**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0624**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG Segment 7EW FB to LD WeldProcedural Procedural Description: Missed UT Indication by QC**Reference Description:** An UT indication (in 7EW FB to LD Weld) found by QA verification at the location where the contractor has tested and accepted**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7EW, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +7.
- Material thickness is 14mm.
- The depth of the indication is approximately 5mm.
- The weld is identified as SEG041C-013 and located at Panel Point PP59 Cross Beam Side.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 230mm from top.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining Longitudinal diaphragm plate (Non SPCM) to Floor Beam Plate X48B (Non SPCM).
- The Notice of Witness Inspection (NWIT) No. is 005120. The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform twenty five (25%) percent UT inspection of this weld.

Applicable reference:

-AWS D1.5-02 Section 6; Table 6.3 specifies a class A indication as having a rating of 10dBs and under for material thicknesses 8mm through 20mm.

-Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Subhasis Bera
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1830 hours, 01-25-10, Email
Name of Caltrans Engineer notified: Bill Howe, Ching Chao
Time and method of notification: 1330 hours, 01-26-10, Verbal
QC Inspector's Name: Zhong Wei
Was QC Inspector aware of the problem: Yes No
Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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



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	SEG041C	报告编号 Report No.	B-WR12123
合同号 Contract No.	04-0120F4	部件名称 Items Name	7EW LONGITUDINAL DIAPH RAGM	NDT报告编号 Report No.of NDT	B787-UT-12337
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

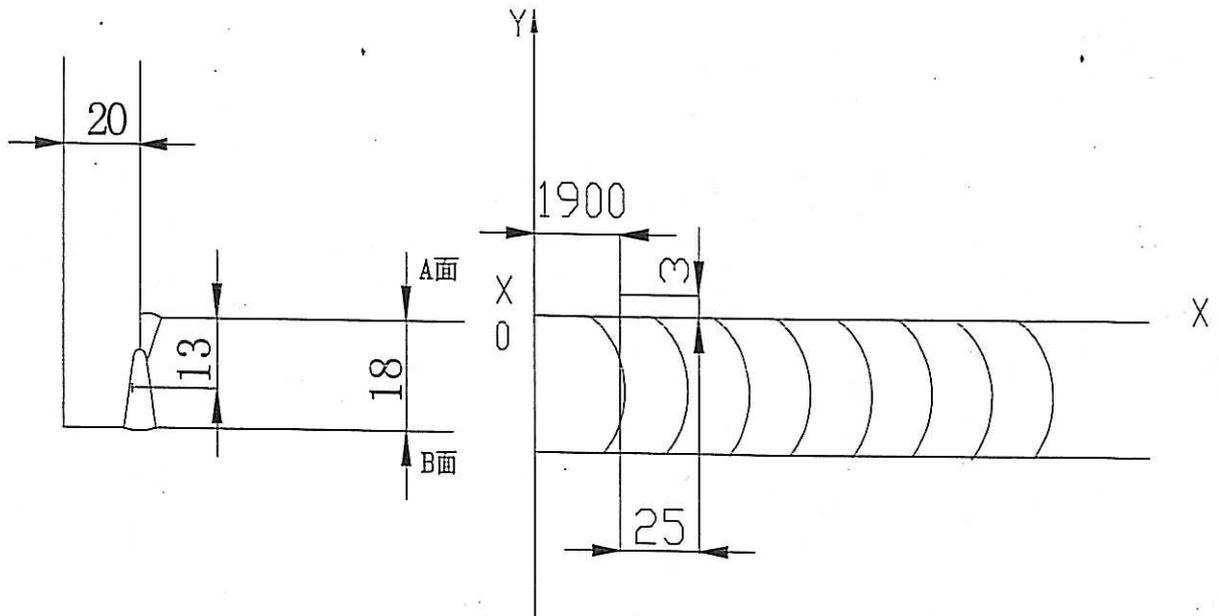
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG041C-013

检验员 (Inspector) Jin Feng 日期(Date): 2010.04.15

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG041C-013

产生原因:

Caused:

1、焊道未及时处理干净。

1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Lizhiqiang* 日期(Date): *4.18*

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D 为缺陷深度, T 为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;

2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;

3. 焊前对修补区域进行VT检测保证缺陷完全被清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 对焊缝进行UT检测, 检测范围为返修区域以及其两端各延长50mm。

1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, "D" is depth of defects, "T" is thickness of metal) to remove all defects;

2. Follow repair WPS for joint preparation, preheat, and weld deposit;

3. Verify with VT no defects remain in the weld joint prior to welding;

4. Grind the repaired area flush with base metal or the adjacent weld;

5. Perform UT inspection to the weld along with 50mm on each end of the repair area;

工 艺: *hexiao*
Technical engineer

审核:
Approved by

日期 *10-7-18*
Date



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	SEG041C	报告编号 Report No.	B-WR12123
合同号 Contract No.:	04-0120F4	部件名称 Items Name	7EW LONGITUDINAL DIA PHRAGM	NDT报告编号 Report No. of NDT	B787-UT-12337
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): *L. Zhang* 日期(Date): *4.18*

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	工艺员 technologist	<i>Maxiaolin</i> <i>4.18</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>720</i>	返修的缺陷 Description of discontinuity	<i>Z-F</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>1090</i>
最大碳刨深度 Max. depth of gouging	<i>7mm</i>	碳刨总长 Total length of gouging	<i>125mm</i>
焊工 welder	<i>045138</i>	焊接类型 welding type	<i>Smaw</i>
焊接电流 Current	<i>172</i>	焊接电压 Voltage	<i>25-3</i>
		焊接位置 position	<i>ZG</i>
		焊接速度 Speed	<i>159</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>07120701</i> <i>L. Zhang</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>2010.4.23</i> <i>Forney</i>
见证: Witness/Review:			
备注: Remark:			



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-12337R1 DATE 2010.04.27 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 7EW LONGITUDINAL DIAPHRAGM DRAWING NO.: SEG041C 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 CORNER-JOINT Dec. 28ST, 2010

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

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T2/F2-X 18/20mm

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°	2.5MHz	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			
SEG041C-013	1R1	70				32									ACC.	100%

AFTER B-WR12123

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EXAMINED BY 主探 <u>Jing Feng</u> LEVEL - II SIGN / DATE <u>10.04.27</u> 质量经理 / QCM 签字 SIGN / 日期 DATE	REVIEWED BY 审核 <u>Huang Jing</u> LEVEL - II SIGN / DATE <u>10.04.27</u> 用户 CUSTOMER 签字 SIGN / 日期 DATE
--	--



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 05-Jan-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: 05.03.06-000551

Subject: NCR No. ZPMC-0561

Reference Description: MT indications discovered after ZPMC had tested and accepted welds on Segment 8BE Corner Assembly

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: 08

Remarks:

During the Quality Assurance Magnetic Particle Testing (MT) review of welds located on Segment 8BE, this Quality Assurance Inspector (QA) discovered the following issues:

- Two (2) Longitudinal linear indication measuring approximately 22mm and 35mm in length.
- The welds are identified as: CSD5-PP67-052 (22 mm) and CSD5-PP67-026 (35 mm).
- The welds are a Fillet Weld type joining the Side Plate (SP467A) and Edge Plate (EP95A) stiffeners to Corner Assembly (CA52A) web plates.
- The OBG 8BE segment is located outside in front of the Blast Shop.

The Notice of Witness Inspection Number (NWIT) is 004978. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel are required to perform twenty five (25%) percent MT inspection of this weld.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Missed MT indications are a chronic issue on the project. Provide the training and equipment required to the ZPMC MT technician to ensure this type of indication is not missed in the future. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0561

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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, P.R. China

Report No: NCR-000588

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 03-Jan-2010

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

NCR #: ZPMC-0561

Type of problem:

Welding Concrete Other

Welding Curing Procedural **Bridge No:** 34-0006

Joint fit-up Coating Other **Component:** OBG Segment 8BE Corner Assembly

Procedural Procedural **Description:** Missed MT indication by QC

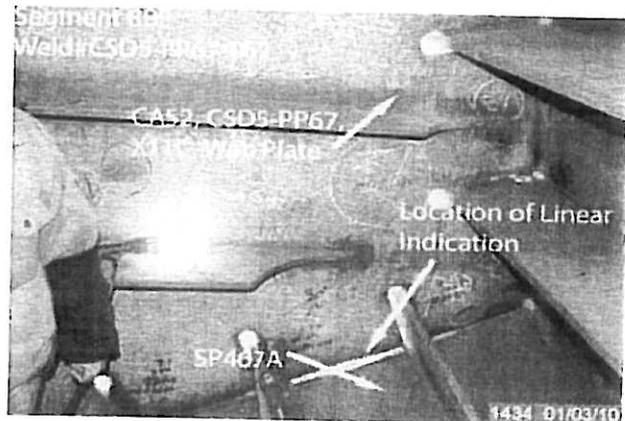
Reference Description: MT indications discovered after ZPMC had tested and accepted welds on Segment 8BE Corner Assembly

Description of Non-Conformance:

During the Quality Assurance Magnetic Particle Testing (MT) review of welds located on Segment 8BE, this Quality Assurance Inspector (QA) discovered the following issues:

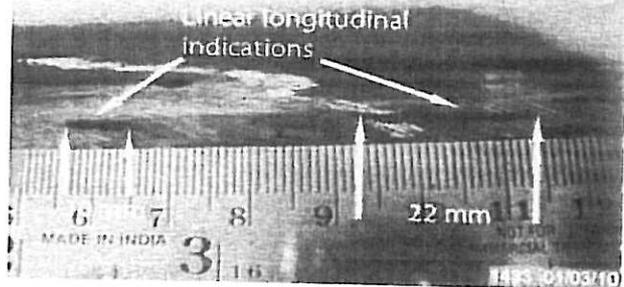
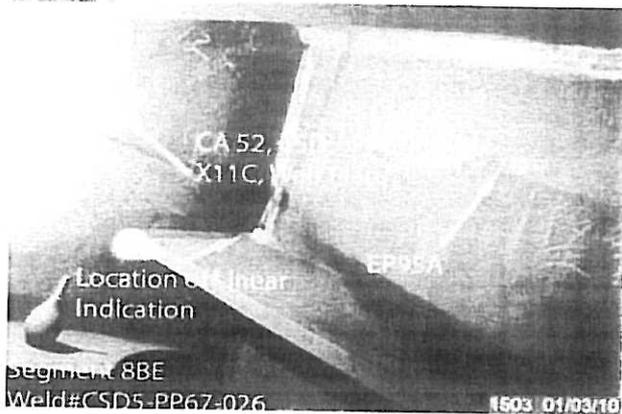
- Two (2) Longitudinal linear indication measuring approximately 22mm and 35mm in length.
- The welds are identified as: CSD5-PP67-052 (22 mm) and CSD5-PP67-026 (35 mm).
- The welds are a Fillet Weld type joining the Side Plate (SP467A) and Edge Plate (EP95A) stiffeners to Corner Assembly (CA52A) web plates.
- The OBG 8BE segment is located outside in front of the Blast Shop.

The Notice of Witness Inspection Number (NWIT) is 004978. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel are required to perform twenty five (25%) percent MT inspection of this weld.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.

Who discovered the problem: Hiranch Patel

Name of individual from Contractor notified: Man Lee Kit

Time and method of notification: 1700 hours, 01/03/10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 2230 hours, 01/03/10, Email

QC Inspector's Name: Wang Xian Pin

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon, Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh, Mazen

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 03-Jan-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: 05.03.06-000544

Subject: NCR No. ZPMC-0554

Reference Description: Missed MT transverse indication by QC for Segment 8CE Corner Assembly

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: 08

Remarks:

During the Quality Assurance Magnetic Particle Testing (MT) review of welds located on OBG Corner Assembly, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Transverse linear indication that measured approximately 8mm in length.
- The weld is identified as CA051-010 at panel point (PP64.5 in Segment 8BE).
- The weld is a fillet weld joining the Vertical Longitudinal Truss (X74H) to the Side Plate (SP458A)
- The Side Panel plate is identified as: PL1353A.
- The OBG Corner Assembly is located in the outside repair yard, south side of the Bay14.

The Notice of Witness Inspection Number (NWIT) is 004978. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% Magnetic Particle inspection of this weld.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. Provide training and equipment as required to the ZPMC MT technician in order to pick up these indications in the future. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0554

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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
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(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-000581**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 02-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0554**Type of problem:**Welding Concrete Other Welding Curing Procedural **Bridge No:** 34-0006Joint fit-up Coating Other **Component:** Segment 8CE Corner AssemblyProcedural Procedural **Description:** Missed MT transverse indication by QC**Reference Description:** Missed MT transverse indication by QC for Segment 8CE Corner Assembly**Description of Non-Conformance:**

During the Quality Assurance Magnetic Particle Testing (MT) review of welds located on OBG Corner Assembly, this Quality Assurance Inspector (QA) discovered the following issue:

-One (1) Transverse linear indication that measured approximately 8mm in length.

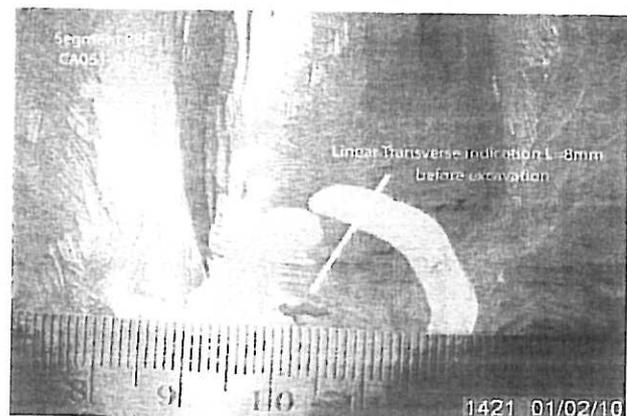
-The weld is identified as CA051-010 at panel point (PP64.5 in Segment 8BE).

-The weld is a fillet weld joining the Vertical Longitudinal Truss (X74H) to the Side Plate (SP458A)

-The Side Panel plate is identified as: PL1353A.

-The OBG Corner Assembly is located in the outside repair yard, south side of the Bay14.

The Notice of Witness Inspection Number (NWIT) is 004978. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% Magnetic Particle inspection of this weld.

**Applicable reference:**

Special Provisions Section 8.3 – "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.

Who discovered the problem: Chandra Sudalaimuthu

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1430 hours, 01/02/10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 2300 hours, 01/02/10, Email

QC Inspector's Name: Wang Xian Pin

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.

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

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-000675**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-May-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0624**Type of problem:**

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

Date the Non-Conformance Report was written: 25-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7EW, this Quality Assurance Inspector (QA) discovered the following issues:

- One (1) longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +7.
- Material thickness is 14mm.
- The depth of the indication is approximately 5mm.
- The weld is identified as SEG041C-013 and located at Panel Point PP59 Cross Beam Side.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 230mm from top.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining Longitudinal diaphragm plate (Non SPCM) to Floor Beam Plate X48B (Non SPCM).
- The Notice of Witness Inspection (NWIT) No. is 005120. The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform twenty five (25%) percent UT inspection of this weld.

Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor submitted post repair NDT documentation verifying weld has been repaired and is in conformance with Contract weld quality requirements. Supplemental training was provided to NDT technicians in addition to the Contractor purchasing new NDT equipment.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

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.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer