

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-000657**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0628**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: 8CE Side Panel to Side Panel Weld
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: UT Indication discovered after ZPMC had tested and accepted this weld in Segment 8CE Side Panel to Side Panel

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) longitudinal linear indication measuring approximately 50mm in length.
- The indication dB rating is a +7.
- Material thickness is 18mm and is designated as A709 grade 345 Seismic Performance Critical Member (SPCM).
- The depth of the indication is approximately 13mm.
- This weld is identified as SEG048B-032 located at the Bike Path side near Panel Point (PP) 69.
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 2270 mm from PP69.
- This weld is a Complete Joint Penetration (CJP) butt joint joining Side Panel (SP317A) to Side Panel (SP468A).
- The two (2) Side Plates are identified PL317A (SPCM) and PL1417A (SPCM).
- Segment 8CE is located outside of the Paint Shop.
- The Notice of Witness Inspection (NWIT) No. is 005144. 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 one hundred (100%) percent UT 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 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 D1.5-2002 Section 6.26.3.2; "Welds that are subject to UT in addition to visual inspection shall be

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

acceptable if they meet the following requirements. Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3.”

AWS D1.5-2002 Section 6 Table 6.3; “States a class `A' indication rating of 10dB and lower for material thicknesses of 8mm through 20mm, shall be rejected regardless of length.”

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Li Man Kit

Time and method of notification: 1500 hours, 01-27-10, Verbal

Name of Caltrans Engineer notified: Bill Howe and Ching Chao

Time and method of notification: 0800 hours, 01-28-10, Verbal

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

NCT

(Continued Page 2 of 2)

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: 05.03.06-000617

Subject: NCR No. ZPMC-0628

Dated: 08-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000571 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-000571R00;

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
孙广强 Sun Guangqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Chunqiang	钢桥
卞源源 Bian Yuanyuan	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	
孙林 Sun 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 Chenggong	钢桥
黄瑞 Huang Rui	钢桥	孙广强 Sun Guangqiang	钢桥
李黎明 Li Liming	钢桥	徐辉 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 Xuellamang	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

Dated: 15-Mar-2010

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Ref: 05.03.06-000617

Document No.: ABF-NPR-000571 **Rev:** 01

Subject: NCR No. ZPMC-0628

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indication and is providing NDT and repair documents showing that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the missed indication and is providing NDT and repair documents showing that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000571R01;

Caltrans' comments:

Status: CLO

Date: 18-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 18-Mar-2010

Attachment(s):



No. B-672

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-15

REGARDING: NCR-000657(ZPMC-0628)

ZPMC acknowledged this problem and has issued internal NCR to warn the same cases. Repair has been completed. ZPMC is providing WRRs and NDT records show the welds are acceptable after repair. Based on this, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000657(ZPMC-0628)

B-WR10559

B787-UT-11102 R1

A handwritten signature in black ink, appearing to be "Jey" followed by a stylized flourish.

3/15/10



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: 28-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: 05.03.06-000617

Subject: NCR No. ZPMC-0628

Reference Description: UT Indication discovered after ZPMC had tested and accepted this weld in Segment 8CE Side Panel to Side Panel

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 Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) longitudinal linear indication measuring approximately 50mm in length.
- The indication dB rating is a +7.
- Material thickness is 18mm and is designated as A709 grade 345 Seismic Performance Critical Member (SPCM).
- The depth of the indication is approximately 13mm.
- This weld is identified as SEG048B-032 located at the Bike Path side near Panel Point (PP) 69.
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 2270 mm from PP69.
- This weld is a Complete Joint Penetration (CJP) butt joint joining Side Panel (SP317A) to Side Panel (SP468A).
- The two (2) Side Plates are identified PL317A (SPCM) and PL1417A (SPCM).
- Segment 8CE is located outside of the Paint Shop.
- The Notice of Witness Inspection (NWIT) No. is 005144. 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 one hundred (100%) percent UT 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.,A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0628

02.02:15.04
 05.03.06-000617,NCT

Received
 NCT-000617 29 Jan 10 Page 1 of 2

NCT

(Continued Page 2 of 2)

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
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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-000657

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 27-Jan-2010

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

NCR #: ZPMC-0628

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: 8CE Side Panel to Side Panel Weld
 Procedural Procedural Description: Missed UT Indication by QC

Reference Description: UT Indication discovered after ZPMC had tested and accepted this weld in Segment 8CE Side Panel to Side Panel

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this Quality Assurance Inspector (QA) discovered the following issue:

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AWS D1.5-2002 Section 6.26.3.2; "Welds that are subject to UT in addition to visual inspection shall be

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

acceptable if they meet the following requirements. Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3.”

AWS D1.5-2002 Section 6 Table 6.3; “States a class `A' indication rating of 10dB and lower for material thicknesses of 8mm through 20mm, shall be rejected regardless of length.”

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Li Man Kit

Time and method of notification: 1500 hours, 01-27-10, Verbal

Name of Caltrans Engineer notified: Bill Howe and Ching Chao

Time and method of notification: 0800 hours, 01-28-10, Verbal

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



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B 项目名称: 美国加州海湾大桥		NCR Number: NCR 编号: NCR-B-436(ZPMC-0628)
Item: Miss UT Indication 名称描述: UT 漏检	Item Number: 件号:	Drawing: 图号: 8CE
Location: 位置: 外场		Date: 日期: 2010-02-09

Description of Nonconformance:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) longitudinal linear indication measuring approximately 50mm in length.
- The indication dB rating is a +7.
- Material thickness is 18mm and is designated as A709 grade 345 Seismic Performance Critical Member (SPCM).
- The depth of the indication is approximately 13mm.
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- Segment 8CE is located outside of the Paint Shop.
- The Notice of Witness Inspection (NWIT) No. is 005144. 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 one hundred (100%) percent UT inspection of this weld.

在对 8CE 进行 UT 随机检验的过程中, 加州工程师发现以下问题:

一条纵向线性缺陷长度将近 50mm, dB 值是+7, 材质厚度是 18mm 并认定是 SPMC 材质, 深度将近 13mm。焊缝号是 SEG048B-032 在悬臂梁侧 PP69.Y 值从 PP69 开始缺陷位置是 2270mm。该焊缝是 CJP 焊缝连接 SP317A 至 SP468A。两块斜底板是 PL317A (SPCM) 和 PL1417A (SPCM)。该缺陷位置之前已经被 ZPMC UT 检验人员所检验并接受。

Work By: Li Li ming 施工方: [Signature]	Prepared by: [Signature] 准备: 02/09/10	Reviewed by QCE: [Signature] 质量工程师批准: 2/9/10
<input type="checkbox"/> Drawing Error 图纸错误	<input type="checkbox"/> Material Defect 材料缺陷	<input type="checkbox"/> Fabrication Error 制作错误
<input type="checkbox"/> Other 其他原因		

Disposition: 处理措施:	<input type="checkbox"/> Use as is 回用	<input type="checkbox"/> Repair 返修	<input type="checkbox"/> Reject 拒收
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Recommendation:

建议:

根据报告进行返修

Repair according to report.

Prepared by: Li Liming 10.03.14
准备

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因:

缺陷长度超标

Defect length exceeded requirement.

Prevention of Re-occurrence:

预防措施:

B, C 级缺陷认真测量

Measure class B and C defect carefully.

Approved by/批准:

Li Liming 10.03.14

Technical Justification for Use-As-Is/Repair:

回用或返修的技术依据:

Attachment

附件

Non-attachment

无附件

Reviewed /批准: _____

Verification:

确认:

Acceptable

可接受

Unacceptable

不可接受

Verified by QCI/质检确认: _____

Reviewed by QCA/质检主任审核: _____



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	SEG048B	报告编号 Report No.	B-WR10559
合同号 Contract No.	04-0120F4	部件名称 Items Name	8CE CORNER ASS SEMBLY AND SIDE PLATE SPLICE	NDT报告编号 Report No. of NDT	B787-UT-11102
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

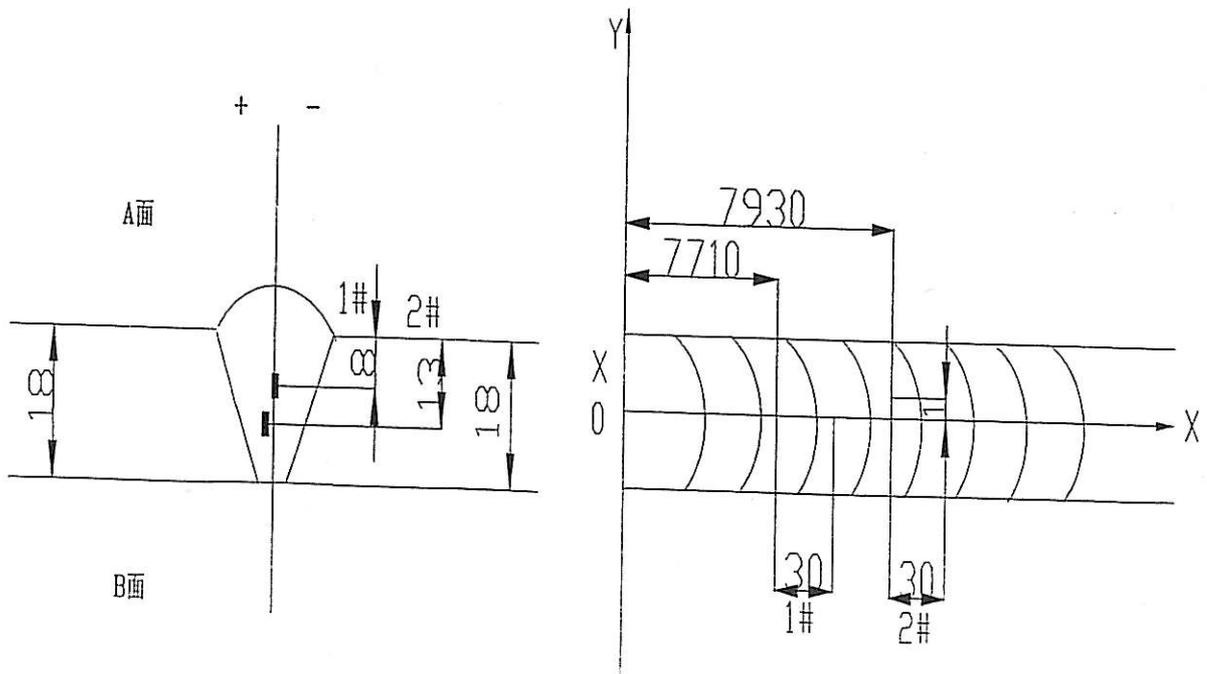
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG048B-032

检验员 (Inspector): Zhou Haijun 日期(Date): 2010.01.27

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG048B-032

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):

Mashi Guan

日期(Date):

12.1.30

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:
Technical engineer

W. Xian

12.1.30

审核:
Approved by

日期
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	SEG048B	报告编号 Report No.	B-WR10559
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8CE CORNER ASS SEMBLY AND SIDE PLATE SPLICE	NDT报告编号 Report No.of NDT	B787-UT-11102
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):

Kashiquan

日期(Date):

10.1.30

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-FCM-Repair WPS-345-SMAW-2 G(2F)-FCM-Repair WPS-345-SMAW-4 G(4F)-FCM-Repair	工艺员 technologist	Heoimolim 10.1.30
返修(碳刨)前预热温度 Preheat temperature before gouging	88	返修的缺陷 Description of discontinuity	ZF
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	126
最大碳刨深度 Max. depth of gouging	9	碳刨总长 Total length of gouging	250
焊工 welder	D44772	焊接类型 welding type	SMAW
焊接电流 Current	181	焊接电压 Voltage	24.7
		焊接位置 position	16
		焊接速度 Speed	185
返修后检查 Inspection After repairing:			
外观检查 VT result	Acc	检验员 Inspector	Zhanghai 10.3.9
NDT复检 NDT result	Acc	探伤员 NDT person	Huang Jue 10.3.9
见证: Witness/Review:			
备注: Remark:			



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-11102 DATE 2010.01.27 PAGE 1 OF 1 Revision No.: 0

PROJECT NO.: 工程编号 ZP06-787

ITEMS NAME: 8CE CORNER ASSEMBLY AND SIDE PLATE SPLICE DRAWING NO.: SEG048B CONTRACTOR: CALTRANS
 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
 SAW FCAW 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 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		
SEG048B-032	1	70	A	2	42	32	3	+7	30	64	8	0	7710	REJ.	100%
	2	70	A	1	43	32	1	+10	30	39	13	+1	7930	REJ.	100%
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EXAMINED BY 主探 Zhou Hai jin LEVEL - II SIGN / DATE 2010.1.27 质量经理 / QCM	REVIEWED BY 审核 Jin Peng LEVEL - II SIGN / DATE 2010.1.27 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-11102R1 DATE 2010.03.09 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 8CE CORNER ASSEMBLY AND SIDE PLATE SPLICE DRAWING NO.: SEG048B 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 IIW BLOCK TYPE II C.M.C A709M-345T2-X 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		
SEG048B-032	1R1	70												ACC.	100%
	2R1	70												ACC.	100%

AFTER B-WR10559

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EXAMINED BY 主探 REVIEWED BY 审核
Huang Jiming 2010.03.09 *Wu Chao* 2010.03.09
 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

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-000558**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0628**Type of problem:**

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

Date the Non-Conformance Report was written: 27-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 8CE, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) longitudinal linear indication measuring approximately 50mm in length.
- The indication dB rating is a +7.
- Material thickness is 18mm and is designated as A709 grade 345 Seismic Performance Critical Member (SPCM).
- The depth of the indication is approximately 13mm.
- This weld is identified as SEG048B-032 located at the Bike Path side near Panel Point (PP) 69.
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 2270 mm from PP69.
- This weld is a Complete Joint Penetration (CJP) butt joint joining Side Panel (SP317A) to Side Panel (SP468A).
- The two (2) Side Plates are identified PL317A (SPCM) and PL1417A (SPCM).
- Segment 8CE is located outside of the Paint Shop.
- The Notice of Witness Inspection (NWIT) No. is 005144. 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 one hundred (100%) percent UT inspection of this weld.

Contractor's proposal to correct the problem:

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

Corrective action taken:

Contractor submitted WRR used to perform weld repairs along with subsequent NDT documentation verifying the weld is in conformance with Contract specifications. An internal NCR was also issued by the Contractor in regards to this issue.

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 152. 1675.3703, who represents the Office of Structural Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer