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-000555
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 21-Dec-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0528

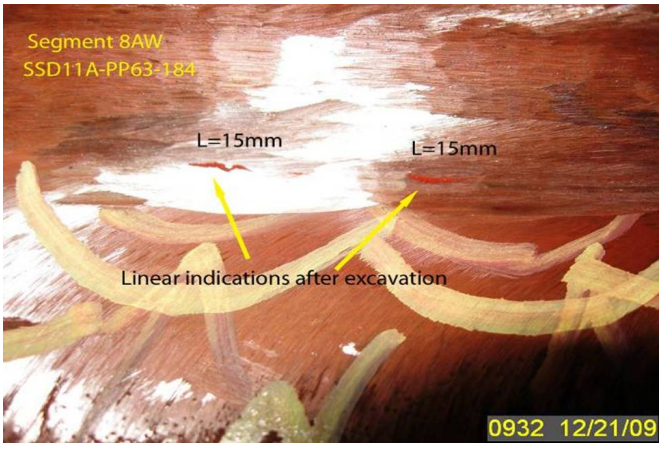
Type of problem:

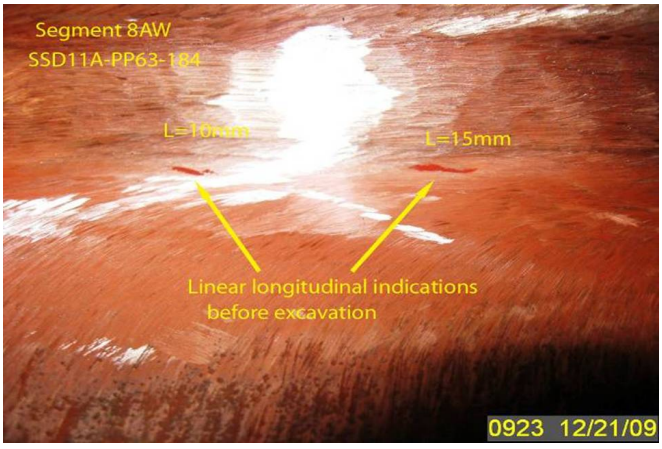
Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** SP Stiffener access hole connected to the Side Plate
Procedural	☐	**Procedural**	☐	**Description:**		

Reference Description: Segment 8AW, 2 Longitudinal Linear indication discovered with the MT method after the contractor's NDT acceptance

Description of Non-Conformance:

During the Quality Assurance Magnetic particle Testing (MT) review of welds located on OBG Segment 8AW, this Quality Assurance Inspector (QA) discovered the following issue:
-Two (2) Longitudinal linear indications that measured from 10mm to 15mm in length, in the fillet weld joining the side panel access hole stiffener (X28D) to the side panel (SP723B) at panel point 63. The weld is designated as SSD11A-PP63-183.
-The OBG Segment 8AW is located in the repair yard north of the blast shop.
The Notice of Witness Inspection Number (NWIT) is 004868. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.





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: Chandra Sudalaimuthu

Name of individual from Contractor notified: Wang Chao

Time and method of notification: 12/21/2009, 1000 hours, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 12/21/2009, 1100 hours, Email

QC Inspector's Name: Wang Wei Ming

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:**	25-Dec-2009
		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:**	05.03.06-000516
Subject:	NCR No. ZPMC-0528		

Reference Description: Segment 8AW, 2 Longitudinal Linear indication discovered with the MT method after the contractor's NDT acceptance

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 Segment 8AW, this Quality Assurance Inspector (QA) discovered the following issue:

-Two (2) Longitudinal linear indications that measured from 10mm to 15mm in length, in the fillet weld joining the side panel access hole stiffener (X28D) to the side panel (SP723B) at panel point 63. The weld is designated as SSD11A-PP63-183.

-The OBG Segment 8AW is located in the repair yard north of the blast shop.

The Notice of Witness Inspection Number (NWIT) is 004868. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Missed MT indications by ZPMC technicians is a chronic problem. Provide additional training to the ZPMC technician that missed these two indications and provide evidence of such training to the engineer. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0528

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

File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV

P.O. BOX 23223 Oakland, CA 94623

Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000516

Subject: NCR No. ZPMC-0528

Dated: **18-Jan-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000499 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster. The ABF QCM has been discussing missed MT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. Preliminary findings have resulted in ZPMC taking immediate action by performing 100% overchecks of the previously tested areas beginning the week of 18 January 09 as a means of preventing future NCR's for missed indications. ABF has purchased powder dispensers for all the ZPMC MT technicians as a means to help control the amount of powder applied during MT testing. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000499R00;

Caltrans' comments:

Status: AAP

Date: 25-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

Submitted by: Chao, Ching

Date: 25-Jan-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

ZPMC

教育培训纪录

培训编号：MT-22-Dec-09

培训内容：	MT Techniques
培训对像：	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
苏伟 Suwei	钢桥	狄坤伦 Di Kunlun	钢桥
孙工 SunGongdang	钢结构	蔡新喜 CaiXinxin	钢桥
徐海 XuHai	钢桥	傅志强 Fuzhiqiang	钢桥
卞源源 BianYuanyuan	钢桥	顾云刚 GuYunnu	钢桥
许兵 XuBing	钢桥	金建廷 Jinjianting	钢桥MT
李振华 Lizhenhua	钢桥	常芳杰 ChangFangjie	钢结
李帅阳 LiXiuYang	QA	袁俊 YuanJun	钢桥
王威 Wangwei	钢桥	刘章敏 LiuZhangmin	
丝林 SiLin	钢桥MT	徐华祥 XuHuaxiang	钢桥
丁阿成 DingAchang	钢桥MT	周东运 ZhongDongyun	钢桥
贺佳佳 HeJiajia	钢桥	赵成刚 ZhaoChenggang	钢桥
黄瑾 Huangjin	钢桥	孙工丁 SunGongdang	钢桥
李黎明 LiLiming	钢桥	徐辉 XuHui	刘宏斌 LiuHongbin
李昌涛 Lichangtao			

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV

P.O. BOX 23223 Oakland, CA 94623

Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000516

Subject: NCR No. ZPMC-0528

Dated: **28-Jan-2010**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000499 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the weld and is providing the CWR and associated NDT showing that the weld is acceptable.

ZPMC acknowledges that the indication was missed and issued an internal NCR to document this issue and make the Production and QC Departments aware of this issue. As a note, the weld joint identified by the inspector as SSD11A-PP63-183, should be SSD11A-PP63-184. ZPMC has repaired the weld and is providing the CWR and associated NDT showing that the weld is acceptable. To reduce incidents of missed indication the ABF QCM has conducted refresher MT training with the ZPMC inspectors on December 23, 2009 and previously submitted documentation. In addition, ZPMC will begin performing 100% verification of tested areas on January 18, 2010 as a means of preventing future missed indications. ABFJV has purchased powder dispensers for all the ZPMC MT technicians as a means to help control the amount of powder applied during MT testing. Based on these actions ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000499R01;

Caltrans' comments:

Status: CLO

Date: 02-Feb-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 02-Feb-2010

Attachment(s):

No. B-593

LETTER OF RESPONSE

TO: American Bridge/Flour
DATE: 2010-1-27
REGARDING: NCR-00555（ZPMC-0528）

With this letter of response, ZPMC requests closure of CT NCR-00555（ZPMC-0528）, what mentioned that CT Inspector observed missed MT indications.

- ZPMC acknowledged this problem and has issued internal NCR. See attached NCR-B-343(ZPMC-528).
- Please be noticed CT inspector located a wrong weld ID. As confirmed on site, the correct weld ID should be SSD11A-PP063-184.
- CWR was issued reflecting to the linear indication. See attached B-CWR1010.
- After repair NDT was performed to warrant the weld's quality. See attached B787-MT-17017R1.

Based on the taken actions and attached documentations, ZPMC requests closure of this NCR.

ATTACHMENT:
NCR-00555（ZPMC-0528)
NCR-B-343(ZPMC-528)
B-CWR1010
B787-MT-17017R1

1/27/10

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-343(ZPMC-0528)
Item: Missed indication by MT 名称描述:磁粉遗漏缺陷	**Item Number:** 件号: N/A	**Drawing:** 图号: N/A
Location: outside yard 位置: 外场		**Date:** 日期: 2009-12-30

Description of Nonconformance:

不符合项状态描述:

During the Quality Assurance Magnetic Particle Testing(MT) review of welds located on OBG Segment 8AW, this Quality Assurance Inspector(QA) discovered the following issues:
-Two Longitudinal linear indications that measured from 10mm to 15mm in length, in the fillet weld joining the side panel access hole stiffener(X28D) to the side panel(SP723B) at panel point 63. The weld is designated as SSD11A-PP63-183.
-The OBG Segment 8AW is located in the repair yard north of the blast shop.
The Notice of Witness Inspection Number(NWIT) is 004868. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control(QC) personnel.
加州检验员在对箱梁 8AW 进行 MT 检验时发现以下情况:
-斜底板人孔加强筋（X28D）与斜底板（SP723B）角焊缝位置，发现两处长约 10 到 15mm 的纵向线性缺陷，PP 号为 63. 焊缝编号为 SSD11A-PP63-183.
-箱梁 8AW 位于冲砂车间北面的返修外场
预约单号为 004868，该缺陷在 ZPMC 之前做过的探伤检测范围内。

Work By: 施工方: 2010/01/27 **Prepared by:** 准备:
Reviewed by QCE: 质量工程师批准: Liaoshuangbao 2009.12.30

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

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

Recommendation:
建议:

确认缺陷，出具报告
Confirm the defect and issue repair report.

Prepared by: 准备 2010/01/27

Approved by QCA: 质量经理批准

Reason for Nonconformance:
不符合原因:

检测比例范围外发现缺陷.

The defect was found out of inspection area.

Prevention of Re-occurrence:
预防措施:

扩大检测比例,

2a large inspection percentage.

Approved by/批准: _____ 2019-11-15

Technical Justification for Use-As-Is/Repair: ☐ **Attachment** 附件 ☐ **Non-attachment** 无附件
回用或返修的技术依据:

Reviewed /批准: _____

Verification: ☐ **Acceptable** 可接受 ☐ **Unacceptable** 不可接受
确认:

Verified by QCI/质检确认: _____ **Reviewed by QCA/质检主任审核:** _____

#R787-QCP-1300

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:**	25-Dec-2009
		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:**	05.03.06-000516
Subject:	NCR No. ZPMC-0528		

Reference Description: Segment 8AW, 2 Longitudinal Linear indication discovered with the MT method after the contractor's NDT acceptance

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 Segment 8AW, this Quality Assurance Inspector (QA) discovered the following issue:

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Action Required and/or Action Taken:

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Transmitted by: Bill Howe
Attachments: ZPMC-0528

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

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-000555
Date: 21-Dec-2009
NCR #: ZPMC-0528

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐
Welding	☑	**Curing**	☐	**Procedural**	☐
Joint fit-up	☐	**Coating**	☐	**Other**	☐
Procedural	☐	**Procedural**	☐	**Description:**	

Bridge No: 34-0006
Component: SP Stiffener access hole connected to the Side Plate

Reference Description: Segment 8AW, 2 Longitudinal Linear indication discovered with the MT method after the contractor's NDT acceptance

Description of Non-Conformance:

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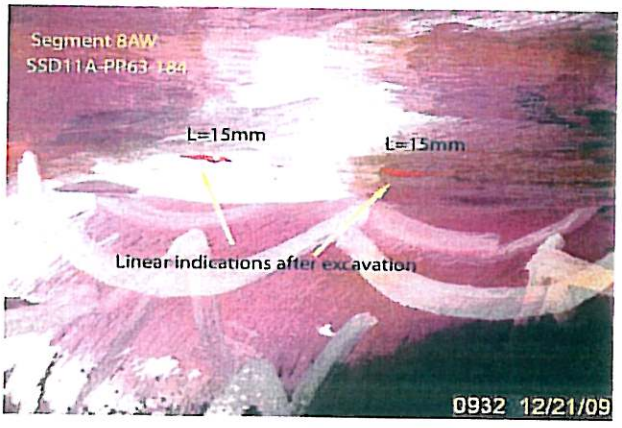

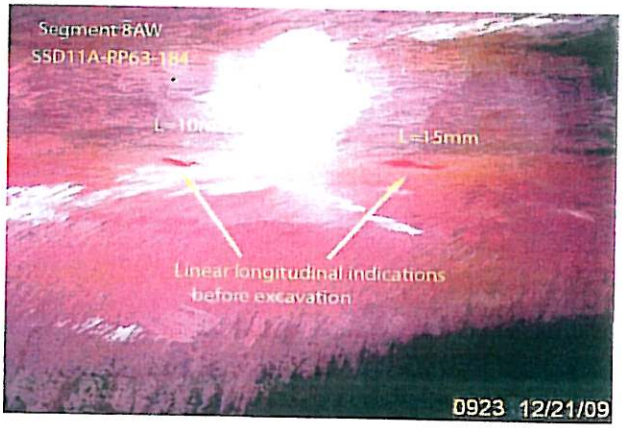

Applicable reference:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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: Wang Chao
Time and method of notification: 12/21/2009, 1000 hours, Verbal
Name of Caltrans Engineer notified: Bill Howe
Time and method of notification: 12/21/2009, 1100 hours, Email
QC Inspector's Name: Wang Wei Ming
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

ZPMC	关键焊缝返修报告 Critical Welding Repair Report (CWR)				版本 Rev. No.: 0
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SSD11A	报告编号 Report No.:	B-CWR1010
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Manhole edge plate	NDT 报告编号 NDT Report No.:	B787-MT-17017
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述：

Description of Welding Discontinuity:

在对SSD11A-PP063-184检测时，发现1处纵向裂纹。L1=50mm

Welder ID No. (焊工编号):043661 Position:(位置)：4G

One longitudinal crack was found by use of MT on SSD11A-PP063-184.

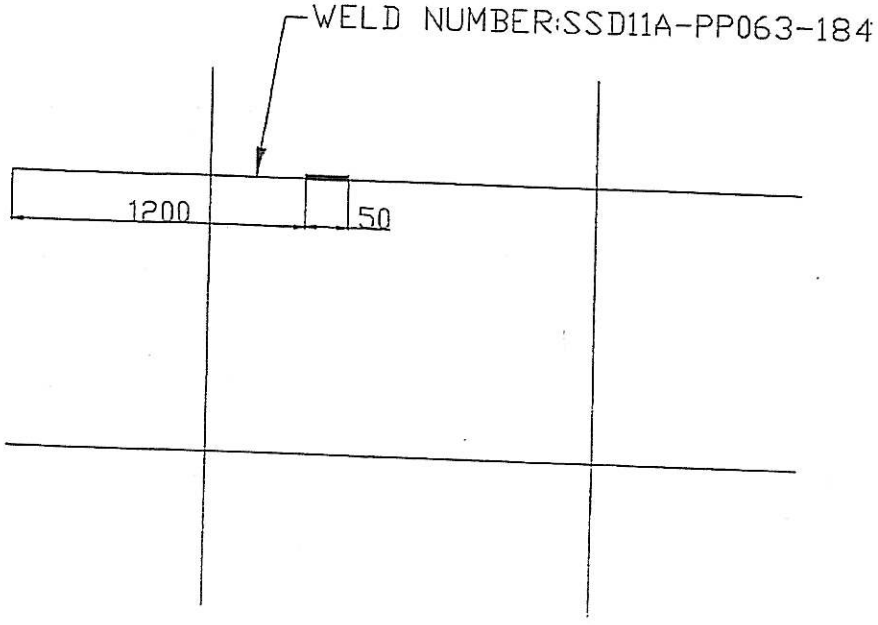
This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SJC Date: 12/24/09

检验员（Inspector）：Sun Gongchang Sun Gongchang

日期 (Date)：2009-12-22 09.12.22

焊缝返修位置示意图：

Draft of Welding Discontinuity:



产生原因:

Cause:

1. 火焰加热时，水汽没有完全的去除或者这个区域预热不够;

1. Moisture wasn't completely removed during drying operation (preheating) or the area wasn't preheated sufficiently.

车间负责人 (Foreman): Li Zhigang 日期 (Date): 09.12.22

处理意见

Disposition :

1. 这次返修时，QC和Leader CWI到现场对打磨，焊接进行指导和监控工作以保证返修按照处理意见进行;
2. 整个返修的过程，QC和Leader CWI应该有批准CWR的复印件;
3. 去除热影响区域上在各个方向上不小于25mm范围内的油漆;
4. 将杂物以及MT检测遗留的残留物清理干净。然后采用打磨的方法去除裂纹，打磨前预热至65° C。对于单个裂纹返修，打磨返修范围为沿缺陷焊缝每一端加50mm;
5. 如果打磨时母材损伤，则在返修前将损伤区域打磨干净；如果打磨时或打磨后根部间隙大于5mm，则在继续返修前另需递交文件给工程师予以审核批准，并按照被批准的方法将角焊缝改成CJP焊缝;
6. 焊接前按照新的焊接返修工艺准备焊缝接头形式;
7. 返修前，VT和MT检测确认返修区域没有裂纹及其他缺陷存在，同时靠近裂纹的母材也要做MT，保证没有裂纹延伸到母材。如果在母材上发现裂纹，则另外需CWR，且只有当这份另出的CWR批准后才能继续返修;
8. 将杂物以及MT检测遗留的残留物清理干净。按照WPS进行预热和焊接，预热温度为160° C-230° C;
9. 焊接后WPS要求进行后热，后热温度为230° C—315° C，后热时间至少1个小时;
10. 后热后将焊缝逐渐冷却到周围环境温度，并控制冷却速率不超过50° C每小时;
11. 后热后将修补区域打磨与母材或相邻焊缝平齐;
12. 在焊缝冷却至环境温度至少经过48小时以后进行NDT检查;
13. 返修后根据图纸进行MT检测，并按照合同10-1.59“钢结构”中的“检验和试验”要求进行附加MT检测。对于CJP焊缝，NDT为VT，MT和UT。

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial S.J.E Date: 12/24/09

1. QC and a Lead CWI shall be present, direct and supervise all grinding and welding operations during this repair to ensure the repair is per the disposition requirements
2. QC and a Lead CWI shall have an approved copy of the CWR in hand prior to the repair.
3. Remove paint≥25mm in all direction of HAZ prior to MT.
4. Clean the excavation area of all loose debris including MT powder. Preheat to 65° C before removing cracks by grinding, repair area shall extend a minimum of 50mm beyond each end of single crack repairs.
5. If base metal is damaged by grinding, the damaged area shall be ground clean prior to performing weld repair. If gap>5mm is found during or after grinding, comply with the notification on changing fillet weld to CJP which is submitted for Engineer's review and approval form.
6. Prepare excavation in accordance with the New Repair Procedure prior to welding.
7. Before this repair, Verify with VT and MT repair areas are defects free, and also MT shall be performed on the base metal laying abroad cracks to ensure that no cracks were propagated to the base metal. Separate CWR approval is needed if cracks are found in the base metal, and only after this new CWR's approval can continue the repair.
8. Clean excavation area of all loose debris including MT powder after excavation. Preheat and weld according to repair WPS, the preheat shall between 160° C-230° C.
9. Perform post weld heating according to repair WPS, the postheat shall between 230° C—315° C and for one hour minimum.
10. Allow the weld to cool to ambient temperature gradually. Control cooling rate after PWHT to no more than 50° C per hour.
11. Grind the repaired area flush with base metal or the adjacent weld after post weld heating.
12. Wait 48 hours at least after the repair area has cooled to ambient temperature before performing NDT.
13. Perform MT inspection to all repair area according to Contract Drawings along with all additional NDT required by the applicable notes Special Provision Section 10-1.59 'Steel Structure', subsection 'inspection testing'. NDT include VT, MT and UT if it is a CJP weld.

工 艺:
Technical Engineer: Yu Dongkai 审核:
Approved By: Liu Zanhua 日期:
Date: 09.12.22

#B787 QCP 000

关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本 Rev. No.:
0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SSD11A	报告编号 Report No.:	B-CWR1010
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Manhole edge plate	NDT 报告编号 NDT Report No.:	B787-MT-17017
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1.返修前，QC确认有效的预热，以将水汽全部去除。

1. QC shall verify sufficient preheat has been applied, to remove moisture, prior to welding.

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SJE Date: 12/24/09

车间负责人 (Foreman): Li zhigang 日期 (Date): 09.12.22

参照的WPS编号 Repair WPS No.:	WPS-345-SMAW-4G(4F)-FCM -Repair	工艺员 Technologist:	Xu Dongkai 09.12.22
返修（碳刨）前预热温度 Preheat Temperature Before Gouging:	N/A	返修的缺陷 Description of Discontinuity:	CR
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	170°C
最大碳刨深度 Max. Depth of Gouge:	N/A	碳刨总长 Total Length of Gouge:	N/A

焊工 Welder:	053013	焊接类型 Welding Type:	SMAW	焊接位置 Position:	4G
焊接电流 Current:	149	焊接电压 Voltage:	22	焊接速度 Speed:	103

返修后检查 Inspection After Repair:

外观检查 VT Result:	Acc	检验员 Inspector:	Li Jianhua 07120701	日 期 Date:	10.01.26
NDT复检 NDT Result:	Acc	探伤员 NDT Person:	Simyong Chung	日 期 Date:	10.01.24

见证：
Witness/Review:

备注：
Remark :

REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-17017	DATE日期 2009.12.22	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:	SSD11A manhole edge plate	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. 28ST ,2009
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
MATERIAL TO BE EXAMINED 检测材料	√WELDING 焊接件 ☐ CASTING 铸件 ☐ FORGING 锻造	Material & thickness 母材,厚度	A709M-345F2-X 32/16mm
WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	T-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			
SSD11A-PP063-184	1	longitudinal crack	50		REJ.	Y=1200
BLANK						

EXAMINED BY主探
Sun Gongchang Sun Gongchang 12.22
LEVEL - II SIGN 签名 / DATE日期

REVIEWED BY 审核
Sw Wei 09.12.22.
LEVEL-II SIGN / DATE日期

质量经理 / QCM
Lai Yanhua 12/22/09
签字 SIGN / 日期 DATE

用户CUSTOMER
签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

ZPMC

		周数	117#
		日期	2010.01.26

Visual Weld Inspection Report
焊缝目视检查报告

Caltrans Contract No. 加州合同编号	04-0120F4	Girder/ 梁:	OBG PlatePanelSplice
Project No.: 项目名称	San Francisco Oakland Bay Bridge 美国海湾大桥	Tower/ 塔:	
Project No.: 项目编号:	ZP06-787	Representative: 质检代表:	
		CWI: 检验员:	Li Jian Guo 李建国
		Quality Assurance Manager ~Approval 质量控制经理:	

Weld No. 焊缝编号	Welder I.D.# 焊工识别号	Location 位置	Welding consumables 焊接材料	Undercut 咬边	Porosity 气孔	Over lap 焊瘤	Crater 弧坑	Arc strike电弧擦伤	Spatters 飞溅	Crack 裂纹	Accept or Reject 接受或拒收	Repair 返修	or Reject after repair 返修后
SSD11A-PP063-184	054013	4G	TL508(H4)(Φ4.0)	√	√	√	√	√	√	√	ACC	NA	NA

☐ After root weld
☑ After CWR or WRR No.:B-CWR1010
☐ After cover pass
☐ After HSR No.:
☐ Others

#R787-QCP-603

" √ " is no defects. " X " is defects. "NA" is not applicable.

ZPMC

REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-17017R1	DATE日期 2010.01.24	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:	SSD11A manhole edge plate	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. 28ST ,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	√ WELDING 焊接件 ☐ CASTING 铸件 ☐ FORGING 锻造	Material & thickness 母材,厚度	A709M-345F2-X 32/16mm
WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	T-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			
SSD11A-PP063-184	1R1			ACC.		
AFTER B-CWR1010						
BLANK						

EXAMINED BY主探 Sun Gongchang Sun Gongchang 2010.01.24 LEVEL - II SIGN 签名 / DATE日期	REVIEWED BY 审核 SU Wei 2010.01.24 LEVEL-II SIGN / DATE日期
质量经理 / QCM 签字 SIGN / 日期 DATE	用户CUSTOMER 签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

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 #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, P.R. China **Report No:** NCS-000501
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 03-Feb-2010
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0528

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☐	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 21-Dec-2009

Description of Non-Conformance:

During the Quality Assurance Magnetic particle Testing (MT) review of welds located on OBG Segment 8AW, this Quality Assurance Inspector (QA) discovered the following issue:

-Two (2) Longitudinal linear indications that measured from 10mm to 15mm in length, in the fillet weld joining the side panel access hole stiffener (X28D) to the side panel (SP723B) at panel point 63. The weld is designated as SSD11A-PP63-183.

-The OBG Segment 8AW is located in the repair yard north of the blast shop.

The Notice of Witness Inspection Number (NWIT) is 004868. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

Contractor's proposal to correct the problem:

Repair indication and submit required NDT documentation to verify the weld is in conformance with Contract specifications.

Corrective action taken:

The Contractor submitted records of a CWR along with the follow-up NDT reports verifying the repairs were made and the weld is in conformance with Contract specifications. The QCM has provided additional training to NDT technicians and purchased new equipment. An internal NCR was also issued.

Note

The indication noted on weld ID SSD11A-PP063-183 was actually on SSD11A-PP063-184.

Did corrective action require Engineer's approval? ☐ **Yes** ☑ **No**

If so, name of Engineer providing approval: **Date:**

Is Engineer's approval attached? ☐ **Yes** ☑ **No**

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Jim Simonis 152.1675.3703, who represents the Office of Structural Materials for your project.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By:	Simonis,Jim	Quality Assurance Inspector
Reviewed By:	Wahbeh,Mazen	QA Reviewer