

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.**Report No:** NCR-000451**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0424**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG 2AW Floor Beam Flange Weld
Procedural	Procedural	Description:	Floorbeam Flange Weld # SSD11-PP15-002

Reference Description: Missed UT indications by QC on OBG 2AW Floor Beam Flange Weld**Description of Non-Conformance:**

During the random Quality Assurance (QA) verification of Ultrasonic Testing (UT) on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one (1) class "A" indication measuring approximately 15 mm in length. This inspection was performed in response to ZMPC's NDT Inspection Notification Sheet document No. 004340.

This weld was previously UT tested and accepted by ZPMC 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 D1.5-2002 Section 6, Table 6.3; Class A, any indication in this category shall be rejected (regardless of length).

AWS D1.5-2002 Section 6.261.1; "The welds shall have no cracks."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Who discovered the problem: Christopher D'souza
Name of individual from Contractor notified: Steve Lawton
Time and method of notification: 1530 hours, Email
Name of Caltrans Engineer notified: Ching Chao
Time and method of notification: 1630 hours, Email
QC Inspector's Name: Zhang 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: 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: 26-Oct-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: 05.03.06-000414

Subject: NCR No. ZPMC-0424

Reference Description: Missed UT indications by QC on OBG 2AW Floor Beam Flange Weld

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:** 02

Remarks:

During the random Quality Assurance (QA) verification of Ultrasonic Testing (UT) on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one (1) class "A" indication measuring approximately 15 mm in length. This inspection was performed in response to ZMPC's NDT Inspection Notification Sheet document No. 004340. This weld was previously UT tested and accepted by ZPMC QC personnel.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.
Note: This indication was found after acceptance by ZPMC QC personnel.

Transmitted by: Bill Howe

Attachments: ZPMC-0424

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000414

Subject: NCR No. ZPMC-0424

Dated: 19-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000424 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC acknowledges the non conformance and is providing the weld repair report and NDT documentation to show the weld was acceptable after repair. ZPMC requests closure of this NCR.

ZPMC acknowledges the non conformance and is providing the weld repair report and NDT documentation to show the weld was acceptable after repair. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000424R00;

Caltrans' comments:

Status: CLO

Date: 30-Nov-2009

The documentation submitted has been reviewed by the Engineer and is considered sufficient to close the NCR.

Submitted by: Chao, Ching

Date: 30-Nov-2009

Attachment(s):



PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 11/19/2009

TO: ROSE MARY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: CT NCR FOR CLOSURE

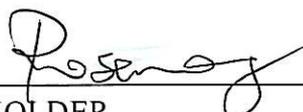
SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

- (1) LETTER OF RESPONSE WITH NO.B-495 FOR CLOSURE.
- (2) CT NCR-000451(ZPMC-0424)
- (3) ZPMC INTERNAL NCR
- (4) THE WELDING REPAIR REPORT
- (5) THE ACCEPTABLE UT REPORTS

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:



 PLAN HOLDER

16:18
 RECEIVED 19 NOV 2009

 DATE



 COMPANY

 PHONE NO.

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



No. B-495

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-11-19

REGARDING: NCR-000451 (ZPMC-0424)

With this letter of response, ZPMC requests closure for Caltrans **NCR-000451 (ZPMC-0424)**. We agree what describe in the non-conformance report. And have found the detail with our NDT operator, the defect indicated on the base metal which extend to the weld areas, that just caused the different evaluation between ZPMC and CT, but we have confirm the defect and performed the weld repair the complete remove the defect.

By the way we are providing the related weld repair report and final UT report to support the weld repair has been complete and accepted with the NDT method.

so base on the above explanation, ZPMC applies to close the caltrans's report **NCR-000451 (ZPMC-0424)**.

Please reference attached document for acceptance and closure the **NCR-000451 (ZPMC-0424)**.

ATTACHMENT:

NCR-000451 (ZPMC-0424)

ZPMC internal NCR

The welding repair report

The acceptable UT reports

Chao Shuangbao

2009. 11. 19.



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-286 (ZPMC-0424)

Item: Miss UT indications
名称描述: UT 漏检

Item Number:
件号: N/A

Drawing:
图号: N/A

Location: OBG 2AW
位置:

Date:
日期: 2009-11-04

Description of Nonconformance:

不符合项状态描述:

During the random Quality Assurance verification of Ultrasonic Testing on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one class 'A' indication measuring approximately 15mm in length. This inspection was performed in response to ZPMC'S NDT Inspection Notification sheet No 004340.

This weld was previously UT tested and accepted by ZPMC QC personnel.

2AW PP15 SSD11-PP15-002 这条焊缝加州发现 ZPMC 的 UT 漏检。此 A 级缺陷长度约为 15 mm。

Work By: Liliny
施工方:
 Drawing Error
图纸错误

Prepared by: Wang
准备:
 Material Defect
材料缺陷

Reviewed by QCE: Zhaoshuang
质量工程师批准:
 Fabrication Error
制作错误
 Other
其他原因 11.5

Disposition: Use as is
处理措施: 回用

Repair
返修

Reject
拒收

Recommendation:

建议: 确认返修. Confirm and repair.

Prepared by: Liliny
准备

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因: 缺陷在母材上,不在焊缝上,存在评定差异.
Defect on base metal; not on weld, existe evaluation error.

Prevention of Re-occurrence:

预防措施: 加强对母材缺陷.
Enhance base metal defect controlling

Approved by/批准: Liliny

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: _____



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: 26-Oct-2009

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

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

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0424

Document No: 05.03.06-000414

Reference Description: Missed UT indications by QC on OBG 2AW Floor Beam Flange Weld

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- 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: 02

Remarks:

During the random Quality Assurance (QA) verification of Ultrasonic Testing (UT) on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one (1) class "A" indication measuring approximately 15 mm in length. This inspection was performed in response to ZMPC's NDT Inspection Notification Sheet document No. 004340. This weld was previously UT tested and accepted by ZPMC QC personnel.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.
 Note: This indication was found after acceptance by ZPMC QC personnel.

Transmitted by: Bill Howe

Attachments: ZPMC-0424

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

02.02.15.04
 05.03.06-000414,NCT

Received
 NCT-000414 26 Oct 09 Page 1 of 1

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

Bay Area Branch
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 (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.

Report No: NCR-000451

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 03-Oct-2009

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

NCR #: ZPMC-0424

Type of problem:Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG 2AW Floor Beam Flange WeldProcedural Procedural Description: Floorbeam Flange Weld # SSD11-PP15-002

Reference Description: Missed UT indications by QC on OBG 2AW Floor Beam Flange Weld

Description of Non-Conformance:

During the random Quality Assurance (QA) verification of Ultrasonic Testing (UT) on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one (1) class "A" indication measuring approximately 15 mm in length. This inspection was performed in response to ZMPC's NDT Inspection Notification Sheet document No. 004340.

This weld was previously UT tested and accepted by ZPMC QC personnel.

Applicable reference:

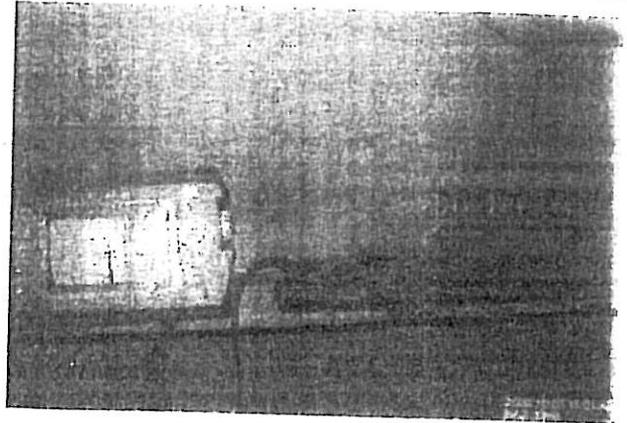
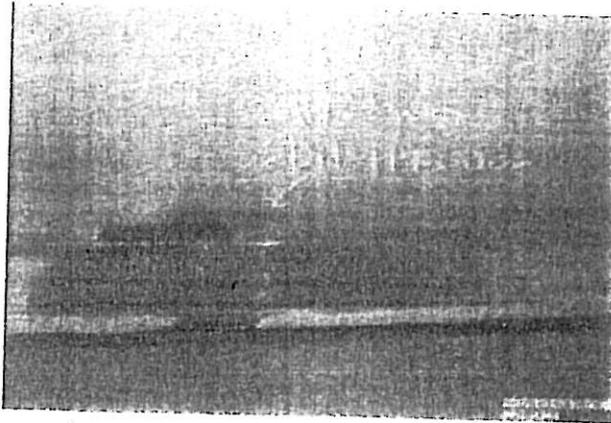
Special Provisions Section 8.3 – "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and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

AWS D1.5-2002 Section 6, Table 6.3; Class A, any indication in this category shall be rejected (regardless of length).

AWS D1.5-2002 Section 6.261.1; "The welds shall have no cracks."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Who discovered the problem: Christopher D'souza
Name of individual from Contractor notified: Steve Lawton
Time and method of notification: 1530 hours, Email
Name of Caltrans Engineer notified: Ching Chao
Time and method of notification: 1630 hours, Email
QC Inspector's Name: Zhang 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: Carreon, Albert

Reviewed By: Wahbeh, Mazen

Lead Reviewer/Task Leader

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	2AW	报告编号 Report No.	B-WR8103
合同号 Contract No.:	04-0120F4	部件名称 Items Name	2A CORNER ASSE MBLY	NDT报告编号 Report No.of NDT	B787-UT-9055
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

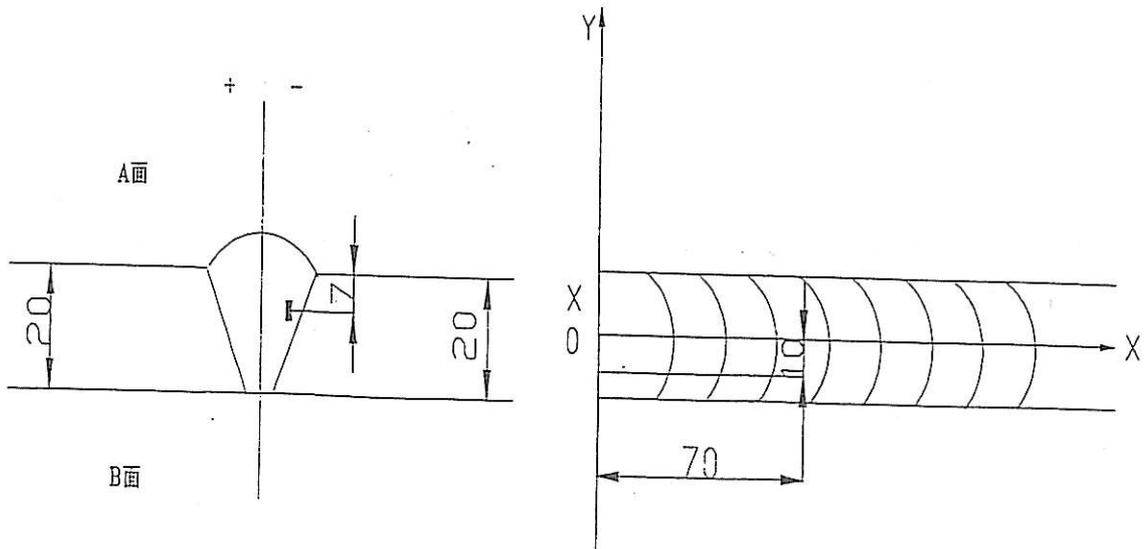
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD11-PP15-002

检验员 (Inspector): Xue Hairong 日期(Date): 09.10.08

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD11-PP15-002

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): *09.10.08*

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. 根据批准的车间图纸检查焊缝.

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. Check the welds according to the working drawings.

工艺: *HexiaoLin*
Technical engineer

09.10.08

审核:
Approved by

duji...

日期 *09.11.13*
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	2AW	报告编号 Report No.	B-WR8103
合同号 Contract No.:	04-0120F4	部件名称 Items Name	2A CORNER ASSE MBLY	NDT报告编号 Report No.of NDT	B787-UT-9055
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 zhi gang* 日期(Date): *09.10.08*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair-1 WPS-345-FCAW-1 G(1F)-Repair-1 WPS-345-SMAW-4 G(4F)-Repair-1	工艺员 technologist <i>Wu zhi cheng</i> <i>08021751</i>	<i>Hexiaolin</i> <i>09.10.08</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</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>108°C</i>
最大碳刨深度 Max. depth of gouging	<i>5mm</i>	碳刨总长 Total length of gouging	<i>180mm</i>
焊工 welder <i>049659</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position <i>1G</i>	
焊接电流 Current <i>150</i>	焊接电压 Voltage <i>22.3</i>	焊接速度 Speed <i>99</i>	
返修后检查 Inspection After repairing:			
外观检查 VT result <i>Acc</i>	检验员 Inspector <i>Wu zhi cheng</i> <i>08021751</i>	日期 Date <i>09.10.20</i>	
NDT复检 NDT result <i>Acc</i>	探伤员 NDT person <i>Huangyong</i>	日期 Date <i>09.11.9</i>	
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
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(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.**Report No:** NCS-000411**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0424**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: 03-Oct-2009**Description of Non-Conformance:**

During the random Quality Assurance (QA) verification of Ultrasonic Testing (UT) on weld joint identified as SSD11-PP15-002 located at panel point 15 2AW. The QA inspector discovered one (1) class "A" indication measuring approximately 15 mm in length. This inspection was performed in response to ZPMC's NDT Inspection Notification Sheet document No. 004340.

This weld was previously UT tested and accepted by ZPMC QC personnel.

Contractor's proposal to correct the problem:

The contractor will repair the weld and perform NDT to verify that the weld is acceptable.

Corrective action taken:

ZPMC has repaired the indications documented in the NCR. ABFJV has conducted the NDT and found that the weld is acceptable.

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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer