

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, China**Report No:** NCR-000985**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 02-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0943**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 14E , Weld# SEG3019BB-157
Procedural	Procedural	Description:	

Reference Description: Missed UT Indications Discovered by QA on Lift 14E Vertical Shear Plate to Anchor Plate Weld

Description of Non-Conformance:

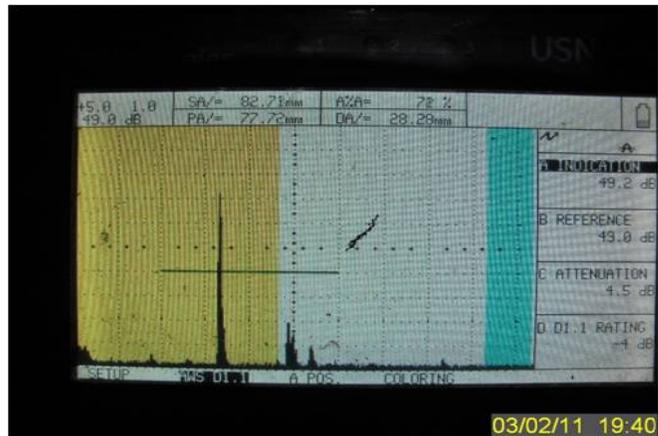
During the Quality Assurance Ultrasonic Testing (UT) review of weld located on Segment 14E, this Quality Assurance Inspector (QA) discovered the following issue:

- A total of two (2) Class "A" rejectable indications measuring approximately 15 and 20mm in length.
- The weld is a Complete Joint Penetration (CJP) Tee Joint, joining the vertical shear plate (SA3364A) to the anchor plate (AP3031A) and is identified as SEG3019BB-157.
- The material thickness is 40mm and the weld is designated as a (FCW) Fracture Critical Weld.
- The depth of the indications are approximately 27 and 29mm.
- The indication db ratings are +3 and -4 respectively.
- The "Y" locations are approximately 1200mm and 1300mm from the termination of the weld at the bottom plate.
- The indication is clearly marked near the weld.
- OBG Segment 14AE located in East Side of fabrication Bay 14.

The Notice of Witness Inspection Number (NWIT) is 08430. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel and was found in an area that has been previously rejected and repaired. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of these welds.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; “Specifies a class A indication as having a dbS rating of +4 and lower for weld thicknesses 38mm through 60mm.”

Class” A”: Any indication in this category shall be rejected (regardless of length).

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 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.”

Who discovered the problem: Dennis Combs

Name of individual from Contractor notified: Lee Man kit

Time and method of notification: 03/03/2011, 0800, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 03/04/2011, 1630, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

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: Devey,Jim SMR

Reviewed By: Wahbeh,Mazen SMR



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: 07-Mar-2011

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: 05.03.06-000942

Subject: NCR No. ZPMC-0943

Reference Description: Missed UT Indications Discovered by QA on Lift 14E Vertical Shear Plate to Anchor Plate 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:** 14

Remarks:

- During the Quality Assurance Ultrasonic Testing (UT) review of weld located on Segment 14E, this Quality Assurance Inspector (QA) discovered the following issue:
- A total of two (2) Class "A" rejectable indications measuring approximately 15 and 20mm in length.
 - The weld is a Complete Joint Penetration (CJP) Tee Joint, joining the vertical shear plate (SA3364A) to the anchor plate (AP3031A) and is identified as SEG3019BB-157.
 - The material thickness is 40mm and the weld is designated as a (FCW) Fracture Critical Weld.
 - The depth of the indications are approximately 27 and 29mm.
 - The indication db ratings are +3 and -4 respectively.
 - The "Y" locations are approximately 1200mm and 1300mm from the termination of the weld at the bottom plate.
 - The indication is clearly marked near the weld.
 - OBG Segment 14AE located in East Side of fabrication Bay 14.

The Notice of Witness Inspection Number (NWIT) is 08430. The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel and was found in an area that has been previously rejected and repaired. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of these welds.

Action Required and/or Action Taken:

Propose a resolution for this non-conformance and provide documentation that the deficiency has been brought into compliance with the contract requirements. Propose a resolution that addresses the apparent failure of Quality Control to identify the indication. Additionally, provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

The response for the resolution of this issue is requested within 7 days.

NCT

(Continued Page 2 of 2)

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0943

cc: Rick Morrow, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000942

Subject: NCR No. ZPMC-0943

Dated: 29-Mar-2011

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000941 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the indication noted in the NCR and is providing NDT documentation after the repair to show the indication has been removed.

ZPMC has repaired the indication noted in the NCR and is providing NDT documentation after the repair to show the indication has been removed. ABFJV has noted which inspector was responsible for this missed indication and is monitoring his performance, if he continues to miss indications disciplinary action will be undertaken. Based on these actions, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000941R00;

Caltrans' comments:

Status: CLO

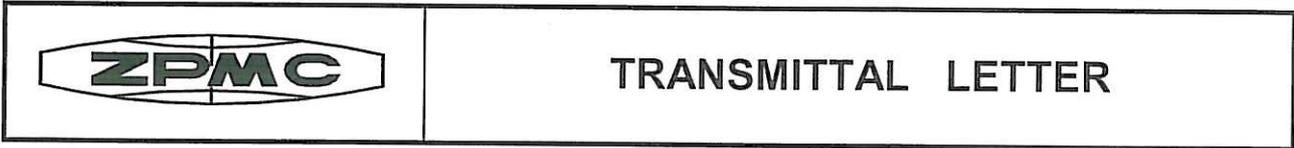
Date: 29-Mar-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0943 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 29-Mar-2011



PROJECT: S.F.O.B.B.

DATE:2011-03-29

TO: ROSEMARY/ABF JV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: OBG NCR

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

- (01) LR: No. B-985
- (02) NCR-000985(ZPMC-0943)
 - B-WR20348 R0
 - B787-UT-19801 R1

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:



COMPANY:



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

16:00
 DATE: RECEIVED 29 MAR 2011

PHONE NO.



No. B-985

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2011-03-29

REGARDING: NCR-000985(ZPMC-0943)

ZPMC acknowledged this problem and has issued an internal NCR. ZPMC has repaired the indications noted in the NCR and is providing WR & NDT documentation after the repair to show the indication has been removed. Based on these actions, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000985(ZPMC-0943)

B-WR20348 R0

B787-UT-19801 R1

Zhangwei
3/29/11





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Shanghai 201913 PR China
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NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 07-Mar-2011

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: 05.03.06-000942

Subject: NCR No. ZPMC-0943

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The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

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- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG

Lift: 14

Remarks:

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NCT

(Continued Page 2 of 2)

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0943

cc: Rick Morrow, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

File: 05.03.06



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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, China

Report No: NCR-000985

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 02-Mar-2011

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

NCR #: ZPMC-0943

Type of problem:

Welding Concrete Other

Welding Curing Procedural Bridge No: 34-0006

Joint fit-up Coating Other Component: Segment 14E, Weld# SEG3019BB-157

Procedural Procedural Description:

Reference Description: Missed UT Indications Discovered by QA on Lift 14E Vertical Shear Plate to Anchor Plate Weld

Description of Non-Conformance:

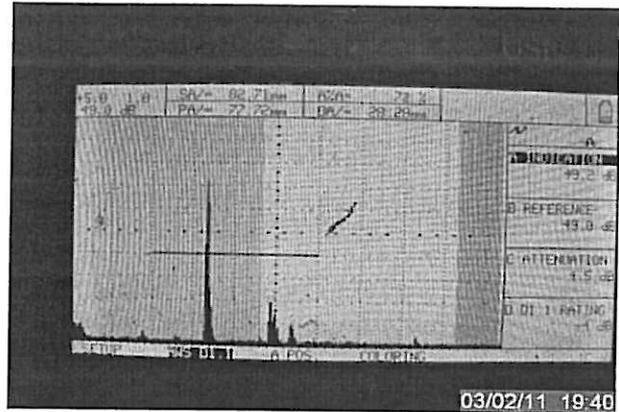
During the Quality Assurance Ultrasonic Testing (UT) review of weld located on Segment 14E, this Quality Assurance Inspector (QA) discovered the following issue:

- A total of two (2) Class "A" rejectable indications measuring approximately 15 and 20mm in length.
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- The depth of the indications are approximately 27 and 29mm.
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3; "Specifies a class A indication as having a dbS rating of +4 and lower for weld thicknesses 38mm through 60mm."

Class "A": Any indication in this category shall be rejected (regardless of length).

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 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."

Who discovered the problem: Dennis Combs

Name of individual from Contractor notified: Lee Man kit

Time and method of notification: 03/03/2011, 0800, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 03/04/2011, 1630, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

Comments:

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Inspected By: Devey, Jim

Reviewed By: Wahbeh, Mazen

SMR

SMR

0943



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	SEG3019BB	报告编号 Report No.	B-WR20348
合同号 Contract No.	04-0120F4	部件名称 Items Name	14E FLOOR BEAM SPLICE	NDT报告编号 Report No. of NDT	B787-UT-19801
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述: (普通UT探伤发现的缺陷长度小于最大允许长度)

(Description of welding discontinuity): Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

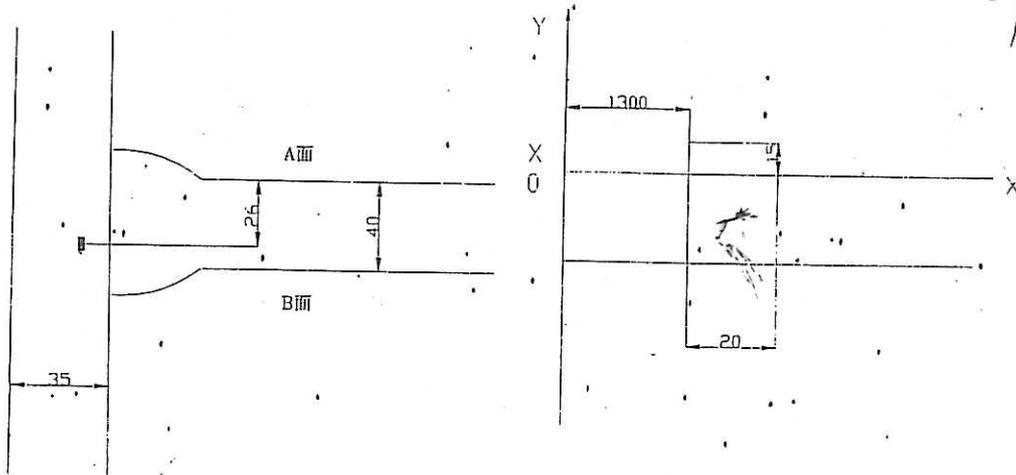
焊缝编号为: SEG3019BB-157

检验员 (Inspector): Zhang Guanli (Date): 2011.03.04

Zhang Guanli

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG3019BB-157

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): *MARUN GUAN* 日期(Date): 2011.03.04

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. 将修补区域打磨到与母材或邻近焊缝平齐;
 4. 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. Grind the repaired area flush with base metal or the adjacent weld;
 4. Check the welds according to the working drawings.

工艺: *Nimilefenj*
Technical engineer

审核: *Lu Panme*
Approved by

日期
Date

2011.03.04



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

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): *Huiyuan* 日期(Date): *2011.03.07*

返修后检查
Inspection After repairing:

外观检查 VT result: √. Acc	检验员 Inspector: <i>Gengwei</i>	日期 Date: 2011-03-12
NDT复检 NDT result: <i>Acc</i>	探伤员 NDT person: <i>Tanyingshan</i>	日期 Date: 2011-03-12

见证:
Witness/Review:

备注:
Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-19801R1 DATE 2011.03.14 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 14E FLOOR BEAM SPLICE DRAWING NO.: SEG3019BB 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 T JOINT Dec. 28ST, 2011

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH 4B 071566311

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T2 40/35mm

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
AMERICA	70°	2.25MHz	0.75×0.625 in				
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		
SEG3019BB-157	1R1	69.8				50.5								ACC.	100%

AFTER B-WR20348

BLANK

EXAMINED BY 主探 <i>Tany Yan Shan</i> LEVEL - II SIGN / DATE 2011.03.14	REVIEWED BY 审核 <i>Xurong Gao</i> LEVEL - II SIGN / DATE 2011.03.14
质量经理 / QCM <i>[Signature]</i> 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE

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, China**Report No:** NCS-000956**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0943**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: 02-Mar-2011**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of weld located on Segment 14E, this Quality Assurance Inspector (QA) discovered the following issue:

- A total of two (2) Class "A" rejectable indications measuring approximately 15 and 20mm in length.
- The weld is a Complete Joint Penetration (CJP) Tee Joint, joining the vertical shear plate (SA3364A) to the anchor plate (AP3031A) and is identified as SEG3019BB-157.
- The material thickness is 40mm and the weld is designated as a (FCW) Fracture Critical Weld.
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Contractor's proposal to correct the problem:

Contractor will repair the weld, and provide the NDT report to prove the weld is acceptable. The performance of the inspector responsible will be monitored and will be disciplined if he is found missing more indications.

Corrective action taken:

Contractor repaired the weld, and NDT report was provided. The NDT report shows the weld is acceptable. The inspector responsible was identified and internal NCR issued.

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:

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Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer