

**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, PRC

**Report No:** NCR-000318

**Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Date:** 12-Jun-2009

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

**NCR #:** ZPMC-0292

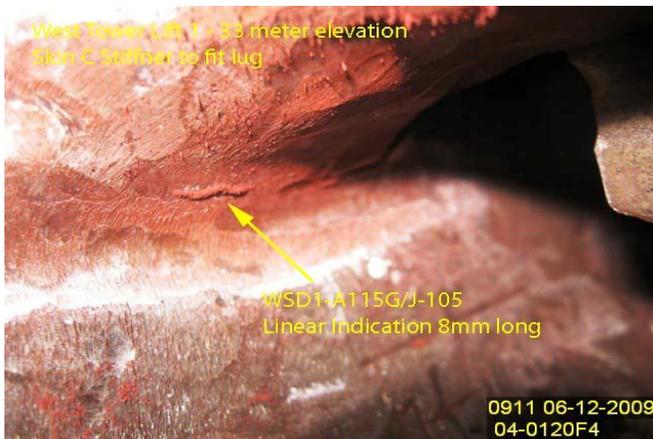
### Type of problem:

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> West Tower, Lift 1
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Missed linear indication on West Tower, Lift 1	

**Reference Description:** Missed linear indication on West Tower, Lift 1 fit lug weld

### Description of Non-Conformance:

QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously 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 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

**Who discovered the problem:** Dhanasingh Sukanthan

**Name of individual from Contractor notified:** Chen wen uang

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** 6/12/09, 9:55; Verbal

**Name of Caltrans Engineer notified:** Scott Kennedy

**Time and method of notification:** 6/15/09, 8:00; Verbal

**QC Inspector's Name:** You Ci Guo

**Was QC Inspector aware of the problem:** Yes No

**Contractor's proposal to correct the problem:**

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Sinevod,Serge	ASMR
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<b>Reviewed By:</b>	Wahbeh,Mazen	SMR
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**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:** 15-Jun-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:** 05.03.06-000281

**Subject:** NCR No. ZPMC-0292

**Reference Description:** Linear Indication (VT) / West Shaft Lift 1 / Fit Lug 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:** Tower **Lift:** 01

**Remarks:**

QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously accepted by ZPMC QC personnel.

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 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

**Action Required and/or Action Taken:**

Propose a resolution for the identified non-conformance including documentation that the deficiency has been brought into compliance with the contract requirements. Additionally address the probable causes for the indication and any actions that will be taken to limit future occurrences.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the failure of Quality Control to identify the linear indication during visual inspection of the weld. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Recent failures by Quality Control to identify linear indications during visual inspection have resulted in the issuance of NCR ZPMC-0250(Tower)and ZPMC-0258(OBG).

**Transmitted by:** Scott Kennedy Sr. Bridge Engineer  
**Attachments:** ZPMC-0292

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# NCT

( *Continued Page 2 of 2* )

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**cc:** Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000281

**Subject:** NCR No. ZPMC-0292

**Dated:** 07-Aug-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000282 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

### Submitted by:

**Attachment(s):** ABF-NPR-000282R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 21-Aug-2009

The proposed resolution is acceptable. The weld in question has been accepted by VT and MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0292 is closed.

**Submitted by:** Wright, Doug

**Date:** 21-Aug-2009

**Attachment(s):**



No. T-046

## LETTER OF RESPONSE

**TO: American Bridge/Flour JV**

**DATE: 2009-8-6**

**REGARDING: NCR-000318, ZPMC-0292**

ZPMC received NCR-000318, it mentioned that QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously accepted by ZPMC QC personnel.

About this NCR CT people have the wrong weld number, the right number is WSD1-A115E/J-105.

The CT inspector Dhanasingh Sukanthan did the final VT work, then he verify the linear indication with the MT machine, our grinder did the grind work as his allowed, then he did the MT to make sure remove the liner indication. Then we did the reweld work. The second day CT inspector BASKAR to make sure the final VT is no problem, and sign the name on the report.

By the way we have instructed the QC guy that should be more careful in the final visual inspection and if found some suspected indication in the surface, then could verified by MT method to avoid miss-discovery.

So base on the above description and attached documentation ZPMC want CT to close this NCR.

**ATTACHMENT:**

NDT Inspection Notficiation Sheet:3380

Visual inspection report

NCR-00318,ZPMC-0292

*Li Xinyang*

*09. 8. 6*

DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
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Contract #: 04-0120F4  
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File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000318

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 12-Jun-2009

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

NCR #: ZPMC-0292

### Type of problem:

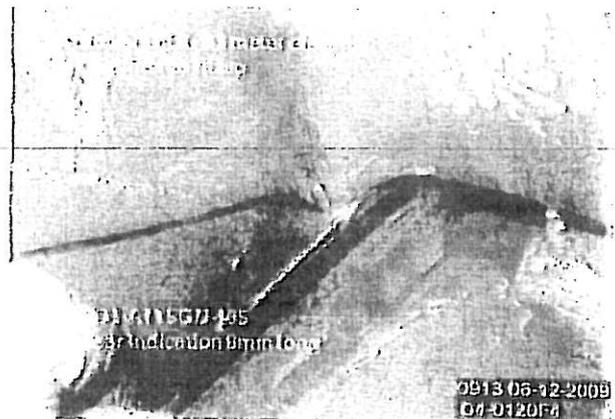
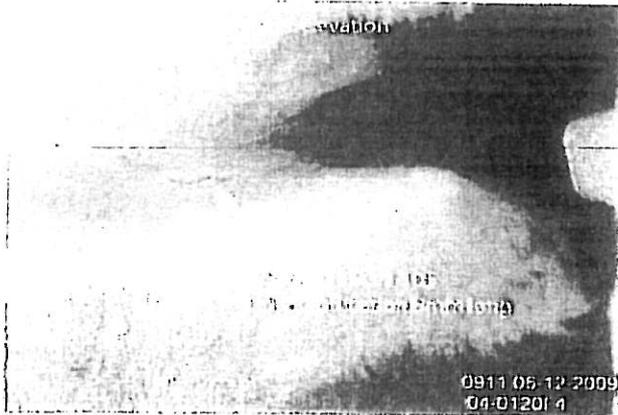
Welding  Concrete  Other   
Welding  Curing  Procedural  Bridge No: 34-0006  
Joint fit-up  Coating  Other  Component: West Tower, Lift 1  
Procedural  Procedural  Description: Missed linear indication on West Tower, Lift 1

Reference Description: Missed linear indication on West Tower, Lift 1 fit lug weld

### Description of Non-Conformance:

QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously accepted by ZPMC QC personnel.

E



### 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 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Who discovered the problem: Dhanasingh Sukanthan

Name of individual from Contractor notified: Chen wen uang

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 6/12/09, 9:55; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 6/15/09, 8:00; Verbal

QC Inspector's Name: You Ci Guo

Was QC Inspector aware of the problem:  Yes  No

Contractor's proposal to correct the problem:

## Comments:

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Inspected By:	Sinevod,Serge	ASMR
Reviewed By:	Wahbeh,Mazen	SMR

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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 Date: 15-Jun-2009  
375 BURMA ROAD  
OAKLAND CA 95607 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: 05.03.06-000281  
Subject: NCR No. ZPMC-0292

Reference Description: Linear Indication (VT) / West Shaft Lift 1 / Fit Lug 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: Tower Lift: 01

Remarks:

QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously accepted by ZPMC QC personnel.

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 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the deficiency has been brought into compliance with the contract requirements. Additionally address the probable causes for the indication and any actions that will be taken to limit future occurrences.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the failure of Quality Control to identify the linear indication during visual inspection of the weld. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Recent failures by Quality Control to identify linear indications during visual inspection have resulted in the issuance of NCR ZPMC-0250(Tower) and ZPMC-0258(OBG).

Transmitted by: Scott Kennedy Sr. Bridge Engineer  
Attachments: ZPMC-0292

NCT

( Continued Page 2 of 2 )

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cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06



NDT 客户检验通知单

NDT Inspection Notification Sheet

文件编号:

Document No. 003380

申请递交时间:

Submit time:

2009-6-11 14:57

Shift	序号 No	检验内容 Inspection	待检验构件 Inspection part	产品分类 Section	检验场地 Inspection Place	计划检验时间 Inspection Time
DAY SHIFT	1	FINAL VT FOR WELDS	33M/28M DOUBLE DIAPHRAGM TO SKIN B/C WELDS	WEST TOWER LIFT 1 WELDS	BAY 11	15:30 FOR GREEN TAG
	2	FINAL VT FOR WELDS	33M/28M DOUBLE DIAPHRAGM TO SKIN B/C FIT LUGS	WEST TOWER LIFT 1 FIT LUGS	BAY 11	15:30 FOR GREEN TAG
	3	FINAL VT FOR WELDS	65M DOUBLE DIAPHRAGM TO SKIN B/C FIT LUGS	WEST TOWER LIFT 2 FIT LUGS	BAY 11	15:30 FOR GREEN TAG
	4	FINAL VT FOR WELDS	65M DOUBLE DIAPHRAGM TO SKIN B/C WELDS	WEST TOWER LIFT 2 WELDS	BAY 11	15:30 FOR GREEN TAG
	5	FINAL VT FOR WELDS	65M DOUBLE DIAPHRAGM TO SKIN A FIT LUG (ONLY ONE)	WEST TOWER LIFT 2 FIT LUGS	BAY 11	15:30 FOR GREEN TAG
	6	FINAL VT FOR WELDS	65M DOUBLE DIAPHRAGM TO SKIN D FIT LUG (ONLY THREE)	WEST TOWER LIFT 2 FIT LUGS	BAY 11	15:30 FOR GREEN TAG
	7	FINAL VT FOR WELDS	A SMALL STIFFENER ON SKIN B BESIDE 65M	WEST TOWER LIFT 2 SMALL STIFFENER	BAY 11	15:30 FOR GREEN TAG

备注:

Note:

- 1、见证通知发出后, 现场等待时间通常不超过30分钟; 如有变动, 现场通知。
- 1、When ZPMC give this table to Caltrans,Zpmc will do the inspection in 30 minutes. If we change the plan, we will inform Caltrans in the shop.
- 2、ZPMC根据自己的检验控制点 (HOLD POINT) 进行日常检验。
- 2、ZPMC will do any inspection according to the HOLD POINT.
- 3、此单为临时试用单, 仅适用于完工焊缝的NDT检验见证通知。
- 3、This table is a temporary one, just for final NDT inspection notification.

联系人:

Requested By:

CT签收人:

CT Receiver:

签收时间:

Time:

5、具体焊缝编号请查看附页。

5、The weld ID is on the attachment.

- 4、QC检验完成后, QA是否需要复验, 由QA自行决定, QC不再另行通知。复验等待时间通常为24小时。
- 4、When ZPMC QC finish NDT inspection, Caltrans QA can decide if they want to retest it. ZPMC QC will not inform Caltrans again. The waiting time is 24 hours ordinarily.

W-L1-07 - West Shaft - Lift 1 - Fit lug to Skin C

22-May-09

No of weld	Description		Parts Number	Weld Joint Number	ZPMC Signature	ABF Signature	CT Signature	Date of VT / MT	Notification no.
104	C4 ~ 33m (Top)	Lug to Stiff.	p87	WSD1-A115 E/J-227	YUJUN GUNO	Chen Waling	B-248	6-12-09	3380
		Lug to Diap.		WSD1-A115 E/J-226					
105		Lug to Stiff.	p87	WSD1-A115 E/J-228					
		Lug to Diap.		WSD1-A115 E/J-229					
106	C5 ~ 33m (Top)	Lug to Stiff.	p87	WSD1-A115 E/J-231					
		Lug to Diap.		WSD1-A115 E/J-230					
107		Lug to Stiff.	p87	WSD1-A115 E/J-232					
		Lug to Diap.		WSD1-A115 E/J-233					
108	C6 ~ 33m (Top)	Lug to Stiff.	p87	WSD1-A115 E/J-235					
		Lug to Diap.		WSD1-A115 E/J-234					
109		Lug to Stiff.	p87	WSD1-A115 E/J-236					
		Lug to Diap.		WSD1-A115 E/J-237					
110	C1 ~ 33m (Bom)	Lug to Stiff.	p1289	WSD1-A115 E/J-98					
		Lug to Diap.		WSD1-A115 E/J-97					
111	C2 ~ 33m (Bom)	Lug to Stiff.	p1289	WSD1-A115 E/J-101					
		Lug to Diap.		WSD1-A115 E/J-102					
112	C3 ~ 33m (Bom)	Lug to Stiff.	p87	WSD1-A115 E/J-104		Jun 11 09			
		Lug to Diap.		WSD1-A115 E/J-103					
113		Lug to Stiff.	p87	WSD1-A115 E/J-105					
		Lug to Diap.		WSD1-A115 E/J-106					
114	C4 ~ 33m (Bom)	Lug to Stiff.	p87	WSD1-A115 E/J-110					
		Lug to Diap.		WSD1-A115 E/J-109					
115		Lug to Stiff.	p87	WSD1-A115 E/J-111					
		Lug to Diap.		WSD1-A115 E/J-112					
116	C5 ~ 33m (Bom)	Lug to Stiff.	p87	WSD1-A115 E/J-114					
		Lug to Diap.		WSD1-A115 E/J-113					
117		Lug to Stiff.	p87	WSD1-A115 E/J-115					
		Lug to Diap.		WSD1-A115 E/J-116					
118	C6 ~ 33m (Bom)	Lug to Stiff.	p87	WSD1-A115 E/J-118					
		Lug to Diap.		WSD1-A115 E/J-117					
119		Lug to Stiff.	p87	WSD1-A115 E/J-119			B-248		
		Lug to Diap.		WSD1-A115 E/J-120					
120	C1 ~ 38m (Top)	Lug to Stiff.	p1289	WSD1-A115 F/J-213	Amir	Chen Waling		6-9-09	3359
		Lug to Diap.		WSD1-A115 F/J-212					
121	C2 ~ 38m (Top)	Lug to Stiff.	p1289	WSD1-A115 F/J-215					
		Lug to Diap.		WSD1-A115 F/J-214					
122	C3 ~ 38m (Top)	Lug to Stiff.	p87	WSD1-A115 F/J-217	Jun 9 09		B-204		
		Lug to Diap.		WSD1-A115 F/J-216					
123		Lug to Stiff.	p87	WSD1-A115 F/J-218	Amir	Chen Waling			
		Lug to Diap.		WSD1-A115 F/J-219					

**DEPARTMENT OF TRANSPORTATION**

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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, PRC**Report No:** NCS-000287**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0292**Type of problem:**

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

**Date the Non-Conformance Report was written:** 12-Jun-2009**Description of Non-Conformance:**

QA discovered an 8mm long linear indication during random verification visual inspection of West Tower, Lift 1, Skin C Stiffener to fit lug weld WSD1-A115G/J-105. This weld was previously accepted by ZPMC QC personnel.

**Contractor's proposal to correct the problem:**

Repair affected weld.

**Corrective action taken:**

The affected weld has been repaired and a NDT report indicating a sound weld has been submitted. The weld has been verified by QA and green tagged.

**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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

**Inspected By:** Sinevod, Serge

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer