

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



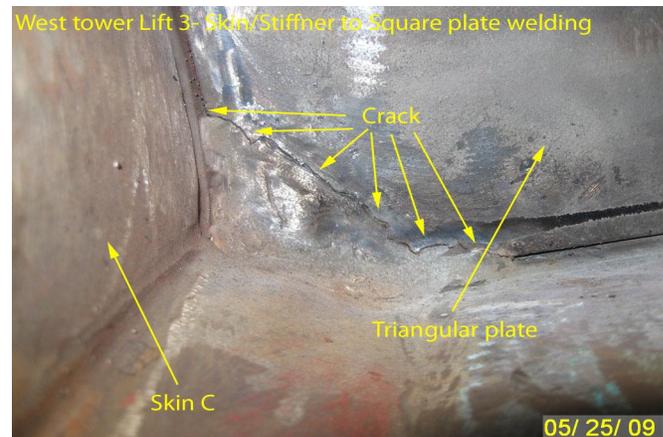
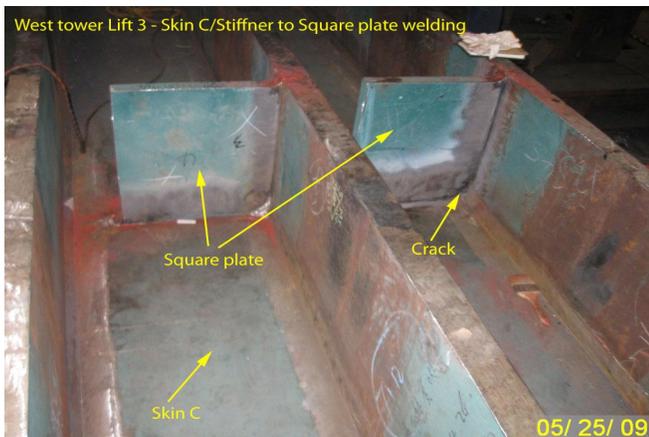
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000276**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0250**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower, Lift 3
Procedural	Procedural	Description: West Tower, Lift 3, Skin C	

Reference Description: West Tower, Lift 3, Skin C linear indication**Description of Non-Conformance:**

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.

**Applicable reference:**

AWS D1.5-2002 Section 6.26.1.1 "The welds shall have no cracks."

Section 6.26.1.2 "Thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal."

Who discovered the problem: Hari Pandu Ranga Rao Gady**Name of individual from Contractor notified:** Mr. Luo**Time and method of notification:** 5/25/2009, 14:30; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 5/26/2009, 13:30; Verbal**QC Inspector's Name:**

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000241

Subject: NCR No. ZPMC-0250

Dated: 22-Jun-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000245 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC to provide an analysis of missed indications to determine if they can be traced to a personnel trend, such as inspector, welder, location etc.

ZPMC QC did not detect this indication. ABF QCM has held verbal interviews with ZPMC QA/QC and NDT inspectors on several occasions to determine why this and other indications are missed. ABF has requested ZPMC to provide an analysis of missed indications to determine if they can be traced to a personnel trend, such as inspector, welder, location etc. ABF has also informed ZPMC to make sure adequate lighting is provided during inspections. ZPMC will provide the inspection documentation for this weld at a later date for close out.

Submitted by:

Attachment(s): ABF-NPR-000245R00

Caltrans' comments:

Status: AAP

Date: 02-Jul-2009

The response is acceptable, but the Non-Conformance is not closed.

Please provide the analysis mentioned above to determine if the missed indications can be traced to particular inspectors. Also, provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0250 at that time.

Submitted by: Wright, Doug

Date: 02-Jul-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000241

Subject: NCR No. ZPMC-0250

Dated: 16-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000245 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indication and performed MT to ensure that the weld is acceptable. In the future, ZPMC QC will ensure that the weld is preheat sufficiently to eliminate the hydrogen.

ZPMC has repaired the missed indication and performed MT to ensure that the weld is acceptable. ZPMC believes that this indication was the result of insufficient preheat of to remove the hydrogen from the weld. In the future, ZPMC QC will ensure that the weld is preheat sufficiently to eliminate the hydrogen. Additionally, the ABFJV QCM will has schedule training on the topic of pre heat for the QC inspectors.

In order to improve identification of these indications ABFJV's QCM conducted training with ZPMC's MT inspectors in October 2009 and submitted the training agenda and sign in sheet to the Department. Refresher training will be conducted to continue the emphasis on performing quality inspections. Data shows a decrease in the number of missed indications from October to November. In addition, ABFJV has implemented NDT verification of welds in the Tower to ensure that welds are acceptable prior to being inspected by the Engineer. Based on these actions, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000245R01;

Caltrans' comments:

Status: AAP

Date: 16-Dec-2009

In AVF-NPR-000245R00, ABF stated that it had requested ZPMC to provide an analysis of missed indications to determine if they could be traced to a personnel trend, such as inspector, welder, location etc. The Department would like to have this analysis submitted as a part of the closing documents for this NCR. Please submit this analysis as soon as possible.

Submitted by: Lee, Ken

Date: 16-Dec-2009

Attachment(s):



No. T-104

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-12-16

REGARDING: NCR-000276 ZPMC-0250

Our ZPMC acknowledged this problem, and we did the repair work at the first time, and then our MT people to do the MT again to make sure no problem, and then inform CT people confirm these welds.

Right now the green tag was on the welds already.

So ZPMC request CT could take a review and close the NCR.

ATTACHMENT:

T787-MT-7432

Welding repair report :T-WR2836

NCR-00276,ZPMC-0250

Li Xinyang

09.12.16.

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: 27-May-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: 05.03.06-000241

Subject: NCR No. ZPMC-0250

Reference Description: Linear Indication / West Shaft Lift 3 Skin C / Intermediate Stiffener to Longitudinal Stiffener 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: 03

Remarks:

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.

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. In addition provide the identity and training record/history of the QC inspector or inspectors that performed the visual inspection of the weld.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0250

cc: Rick Morrow, Gary Pursell, Mark Woods, Jason Tom

File: 05.03.06

02 02:15:04
05.03.06-000241,NCT

Received
NCT-000241 27 May 09 Page 1 of 1

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-000276

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 25-May-2009

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

NCR #: ZPMC-0250

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural

Bridge No: 34-0006

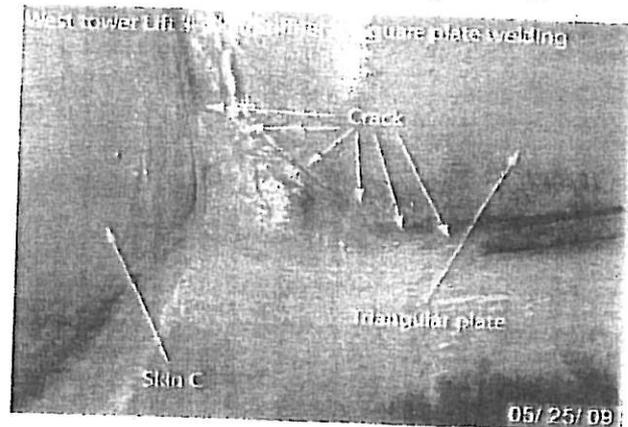
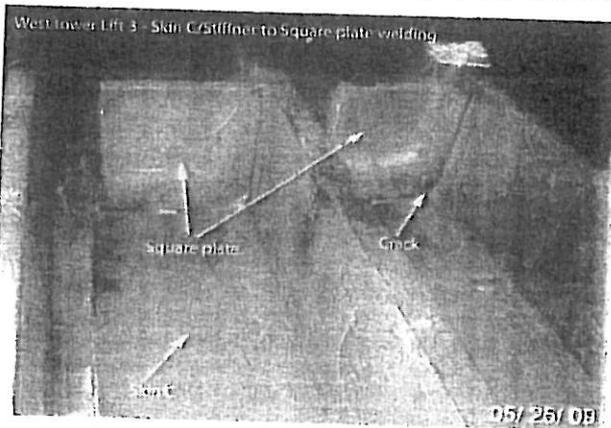
Component: West Tower, Lift 3

Description: West Tower, Lift 3, Skin C

Reference Description: West Tower, Lift 3, Skin C linear indication

Description of Non-Conformance:

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.



Applicable reference:

AWS D1.5-2002 Section 6.26.1.1 "The welds shall have no cracks."

Section 6.26.1.2 "Thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal."

Who discovered the problem: Hari Pandu Ranga Rao Gady

Name of individual from Contractor notified: Mr. Luo

Time and method of notification: 5/25/2009, 14:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 5/26/2009, 13:30; Verbal

QC Inspector's Name:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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.

Inspected By: Sinevod,Serge

ASMR

Reviewed By: Wahbeh,Mazen

SMR



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	WSD1-FCSA3-2C/C	报告编号 Report No.	T-WR2836
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西三C面板小筋板 Tower(w) third lifting Skin C stiffener	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

缺陷描述

Description of welding discontinuity:

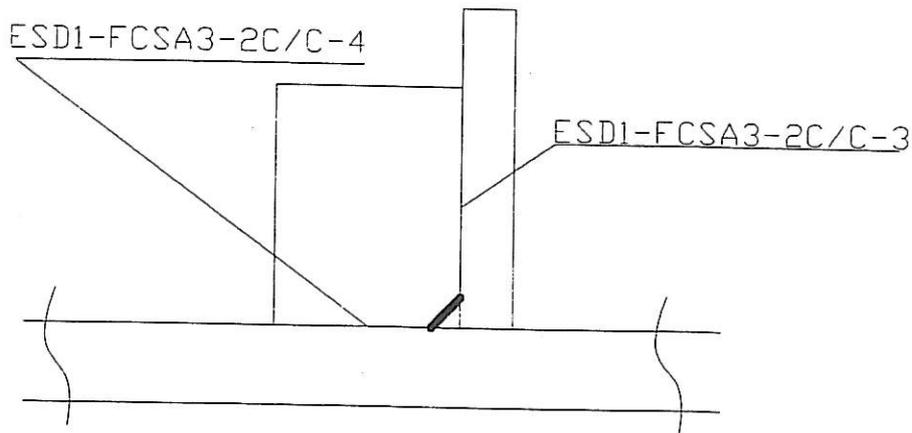
西三C面板纵向筋与小筋板焊缝WSD1-FCSA3-2C/C-3,4发现一线性缺陷。具体见下图:

The linear defect was found at weld WSD1-FCSA3-2C/C-3,4 of west tower Skin C stiffener, the detail sees the following draft.

检验员 (Inspector): An Qingxiang 日期 (Date): 2009.05.25

焊缝返修位置示意图:

Draft of welding discontinuity:



注:阴影部分为缺陷位置 Remark: defect position in shadow.



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.	WSD1-FCSA3-2C/	报告编号 Report No.	T-WR2836
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西三C面板小筋板 Tower(w) third lifting Skin C stiffener	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction 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.

车间负责人(Foreman): *Lishiquan* 日期(Date): *09.05.26*

参照的WPS编号 Repair WPS No.	WPS-345-FCAW-2 G(2F)- Repair WPS-345-FCAW-3 G(3F)- Repair WPS-345-SMAW-2 G(2F)- Repair WPS-345-FCAW-3 G(3F)- Repair	工艺员 technologist	<i>Li Chungping</i> <i>09.24.09</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	NA	返修的缺陷 Description of discontinuity	<i>浅性咬边</i>
焊前处理检查 Inspection before welding	<i>Am</i>	焊前预热温度 Preheat temperature before welding	<i>180℃</i>
最大碳刨深度 Max. depth of gouging	NA	碳刨总长 Total length of gouging	NA
焊工 welder	<i>058026</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>150</i>	焊接电压 Voltage	<i>23.8</i>
		焊接位置 position	<i>3G/3F</i>
		焊接速度 Speed	<i>109</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Am</i>	检验员 Inspector	<i>He...</i> <i>07120651</i>
		日期 Date	<i>09.05.26</i>
NDT复检 NDT result	<i>no/ok</i>	探伤员 NDT person	<i>Cai Xin</i>
		日期 Date	<i>09.05.26</i>
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900

产生原因:

Caused:

1. 火焰加热时, 水汽没有完全的去掉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): *Lishi'quan*

日期(Date): *09.05.26*

处理意见

Disposition :

1. QC 须监控碳刨、打磨和焊接过程
2. 碳刨去除缺陷并打磨光滑
3. VT 检测以确保缺陷被清除
4. 焊接须符合 WPS 要求
5. 在进入下道焊缝前, QC 须确保所有焊渣都已被去除干净
6. 打磨返修区域使其与临近焊缝或母材齐平
7. 对返修区域进行 VT, MT 和 UT 检测

1. QC shall monitor gouging/grinding/welding
2. Gouge defects & grind smoothly
3. Verify that defects have been removed with VT
4. Welding shall be in accordance with WPS
5. QC shall ensure all slag is removed prior to deposition of subsequent weld passes
6. Blend repair area with adjacent base metal
7. Perform VT, MT, & UT to repaired area

工艺: *Li' chunqiang 05.25/09*
Technical engineer

审核: *Lu Jintan*
Approved by

日期
Date *09.5.25*

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000241

Subject: NCR No. ZPMC-0250

Dated: 14-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000245 **Rev:** 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC and ABF's analysis to determine if the NCR's regarding missed indications can be traced to individual NDT technicians did not point to any particular inspector. ABF performed refresher training.

ZPMC and ABF have performed an analysis to determine if the NCR's regarding missed indications can be traced to individual NDT technicians. The analysis did not provide a trend to any particular inspector as a repeating violator. As a result, the ABF has again performed refresher training to the ZPMC NDT technicians. Attached is the agenda and training roster. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000245R02;

Caltrans' comments:

Status: CLO

Date: 14-Jan-2010

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0250 is closed.

Submitted by: Lee, Ken

Attachment(s):

Date: 15-Jan-2010



No. T-104

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-12-16

REGARDING: NCR-000276 ZPMC-0250

Our ZPMC acknowledged this problem, and we did the repair work at the first time, and then our MT people to do the MT again to make sure no problem, and then inform CT people confirm these welds.

Right now the green tag was on the welds already.

So ZPMC request CT could take a review and close the NCR.

ATTACHMENT:

T787-MT-7432

Welding repair report :T-WR2836

NCR-00276,ZPMC-0250

Li Xinyang

09.12.16.

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: 27-May-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: 05.03.06-000241

Subject: NCR No. ZPMC-0250

Reference Description: Linear Indication / West Shaft Lift 3 Skin C / Intermediate Stiffener to Longitudinal Stiffener 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: 03

Remarks:

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.

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. In addition provide the identity and training record/history of the QC inspector or inspectors that performed the visual inspection of the weld.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0250

cc: Rick Morrow, Gary Pursell, Mark Woods, Jason Tom

File: 05.03.06

02 02:15:04
05.03.06-000241,NCT

Received
NCT-000241 27 May 09 Page 1 of 1

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-000276

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 25-May-2009

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

NCR #: ZPMC-0250

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural

Bridge No: 34-0006

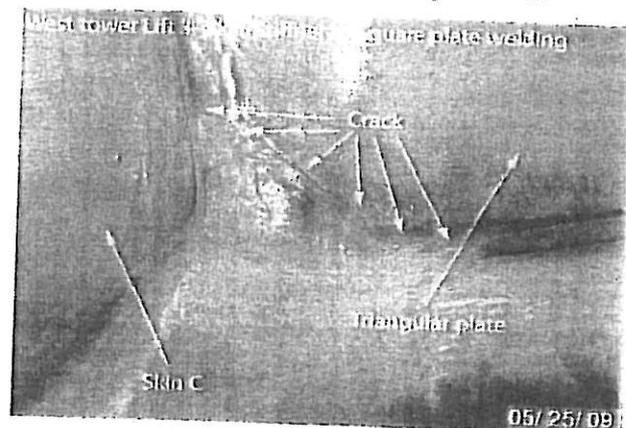
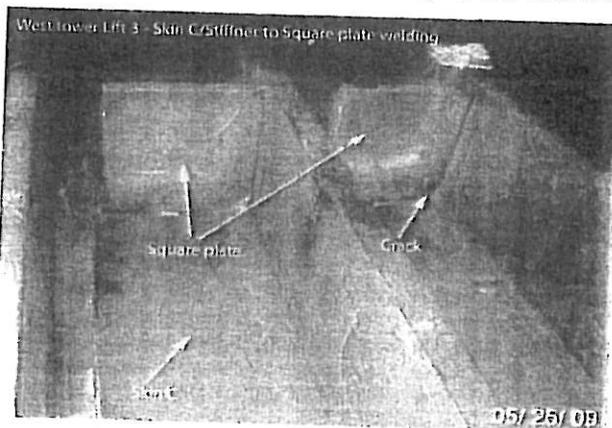
Component: West Tower, Lift 3

Description: West Tower, Lift 3, Skin C

Reference Description: West Tower, Lift 3, Skin C linear indication

Description of Non-Conformance:

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.



Applicable reference:

AWS D1.5-2002 Section 6.26.1.1 "The welds shall have no cracks."

Section 6.26.1.2 "Thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal."

Who discovered the problem: Hari Pandu Ranga Rao Gady

Name of individual from Contractor notified: Mr. Luo

Time and method of notification: 5/25/2009, 14:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 5/26/2009, 13:30; Verbal

QC Inspector's Name:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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.

Inspected By: Sinevod,Serge

ASMR

Reviewed By: Wahbeh,Mazen

SMR



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	WSD1-FCSA3-2C/C	报告编号 Report No.	T-WR2836
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西三C面板小筋板 Tower(w) third lifting Skin C stiffener	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

缺陷描述

Description of welding discontinuity:

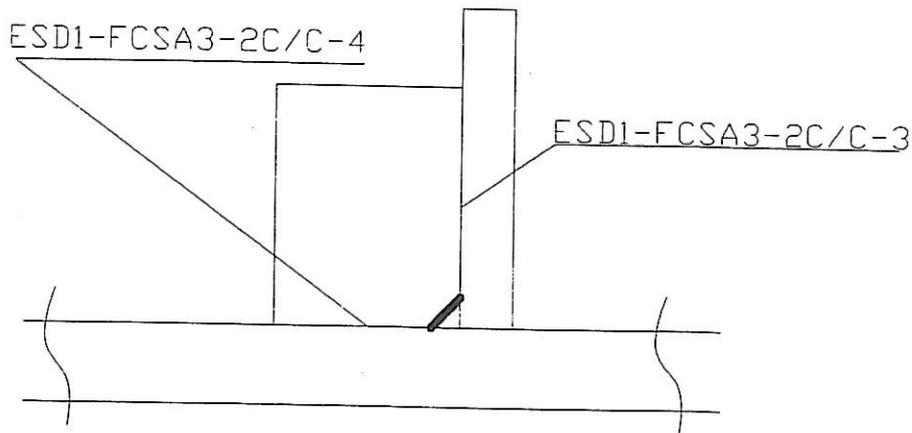
西三C面板纵向筋与小筋板焊缝WSD1-FCSA3-2C/C-3,4发现一线性缺陷。具体见下图:

The linear defect was found at weld WSD1-FCSA3-2C/C-3,4 of west tower Skin C stiffener, the detail sees the following draft.

检验员 (Inspector): An Qingxiang 日期 (Date): 2009.05.25

焊缝返修位置示意图:

Draft of welding discontinuity:



注:阴影部分为缺陷位置 Remark: defect position in shadow.



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.	WSD1-FCSA3-2C/	报告编号 Report No.	T-WR2836
合同号 Contract No.:	04-0120F4	部件名称 Items Name	西三C面板小筋板 Tower(w) third lifting Skin C stiffener	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction 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.

车间负责人(Foreman): *Lishiquan* 日期(Date): *09.05.26*

参照的WPS编号 Repair WPS No.	WPS-345-FCAW-2 G(2F)- Repair WPS-345-FCAW-3 G(3F)- Repair WPS-345-SMAW-2 G(2F)- Repair WPS-345-FCAW-3 G(3F)- Repair	工艺员 technologist	<i>Li Chungping</i> <i>09.24.09</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	NA	返修的缺陷 Description of discontinuity	<i>浅性咬边</i>
焊前处理检查 Inspection before welding	<i>Am</i>	焊前预热温度 Preheat temperature before welding	180℃
最大碳刨深度 Max. depth of gouging	NA	碳刨总长 Total length of gouging	NA
焊工 welder	<i>058026</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>150</i>	焊接电压 Voltage	<i>23.8</i>
		焊接位置 position	<i>3G/3F</i>
		焊接速度 Speed	<i>109</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Am</i>	检验员 Inspector	<i>He...</i> <i>07120651</i>
NDT复检 NDT result	<i>nr/ru</i>	探伤员 NDT person	<i>Cai Xin</i>
日期 Date	<i>09.05.26</i>		
日期 Date	<i>09.05.26</i>		
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900

产生原因:

Caused:

1. 火焰加热时, 水汽没有完全的去掉或者这个区域预热不够;
1. Moisture wasn't completely removed during drying operation (preheating) or the area wa sn't preheated sufficiently.

车间负责人(Foreman): *Lishi'quan*

日期(Date): *09.05.26*

处理意见

Disposition :

1. QC 须监控碳刨、打磨和焊接过程
2. 碳刨去除缺陷并打磨光滑
3. VT 检测以确保缺陷被清除
4. 焊接须符合 WPS 要求
5. 在进入下道焊缝前, QC 须确保所有焊渣都已被去除干净
6. 打磨返修区域使其与临近焊缝或母材齐平
7. 对返修区域进行 VT, MT 和 UT 检测

1. QC shall monitor gouging/grinding/welding
2. Gouge defects & grind smoothly
3. Verify that defects have been removed with VT
4. Welding shall be in accordance with WPS
5. QC shall ensure all slag is removed prior to deposition of subsequent weld passes
6. Blend repair area with adjacent base metal
7. Perform VT, MT, & UT to repaired area

工艺: *Li' chunqiang 05.25/09*
Technical engineer

审核: *Lu Jintan*
Approved by

日期
Date *09.5.25*



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-7432 DATE日期 2009.05.26 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: WSD1-FCSA3-2C/C THE 3RD LIFTING 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: 5620 5395 5617

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-345T2-Z A709M-HPS-485T2-Z 38/70/90mm

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			
WSD1-FCSA3-2C/C-3				ACC.		100%MT
WSD1-FCSA3-2C/C-4				ACC.		100%MT

AFTER T-WR2836

BLANK

EXAMINED BY 主探 Cai Xinxin <u>caixinxin</u> 09.05.26	REVIEWED BY 审核 <u>wang wei</u> 09.05.26
LEVEL-II SIGN 签名 / DATE日期	LEVEL-II SIGN / DATE日期
质量经理 / QCM <u>[Signature]</u> 09.5.26	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



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
孙功强 Sun Gongqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Zhongqiang	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	
施林 Shi 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	孙工 Sun Gong	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	

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

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
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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, PRC**Report No:** NCS-000445**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0250**Type of problem:**

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

Date the Non-Conformance Report was written: 25-May-2009**Description of Non-Conformance:**

During random verification of West Tower, Lift 3, Skin C welds, QA discovered a linear indication at the toe of fillet weld WSD1-FCSA3-2C/C-3,4. This weld was previously tested and accepted by ZPMC personnel.

Contractor's proposal to correct the problem:

Repair indication and perform required NDT

Corrective action taken:

Contractor submitted Welding Repair Report along with NDT documentation verifying the weld is in conformance with Contract specification. MT technicians also received additional training.

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 Michael Ng, who represents the Office of Structural Materials for your project.

Inspected By: Ng, Michael

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer