

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. China**Report No:** NCR-000770**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 20-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0732**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Suspender Bracket for Segment 8CW
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: QA found a 75mm long "class A" UT rejectable indication in a Suspender Bracket at PP70

Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB70W (Segment 8CW), this QA Inspector discovered the following issues:

- One class "A" UT rejectable longitudinal linear indication measuring approximately 75mm in length.
- The indication dBs rating is a +4.
- Material thickness is 35mm.
- The depth of the indication is approximately 28mm.
- The weld is identified as SB016-070-005.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining the Edge Plate X53R to Web Plate SB70W-A.
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 365 mm from bottom cope hole.
- Suspender Bracket SB70W is located at Bay#19.
- The Notice of Witness Inspection (NWIT) No. is 006019. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6: Table 6.3 specifies a class “A” indication as having a rating of 8dbs and under for material thicknesses 21mm through 38mm.

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.”

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jan

Time and method of notification: 1630 hours, 06/20/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1030 hours, 06/21/10, Verbal

QC Inspector's Name: Chan Zhoe

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
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Reviewed By:	Devey, Jim	SMR
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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: 21-Jun-2010

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: 05.03.06-000728

Subject: NCR No. ZPMC-0732

Reference Description: QA found a 75mm long "class A" UT rejectable indication in a Suspender Bracket at PP70

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 (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB70W (Segment 8CW), this QA Inspector discovered the following issues:

- One class "A" UT rejectable longitudinal linear indication measuring approximately 75mm in length.
- The indication dBs rating is a +4.
- Material thickness is 35mm.
- The depth of the indication is approximately 28mm.
- The weld is identified as SB016-070-005.
- The weld is a Complete Joint Penetration (CJP) "T" joint joining the Edge Plate X53R to Web Plate SB70W-A.
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 365 mm from bottom cope hole.
- Suspender Bracket SB70W is located at Bay#19.
- The Notice of Witness Inspection (NWIT) No. is 006019. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0732

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

NCT

(Continued Page 2 of 2)

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000728

Subject: NCR No. ZPMC-0732

Dated: 12-Aug-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000733 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has performed the repair of this indication and attached the subsequent UT report denoting acceptance of this weld.

ZPMC has performed the repair of this indication and attached the subsequent UT report denoting acceptance of this weld. ZPMC and ABFJV have held several meetings with the NDT department regarding missed indications. A disciplinary action procedure has been developed as well as an incentive procedure regarding this issue. We have stressed the point of being more thorough with inspections and to provide a cross checking for designated welds and or if questions arise regarding indications. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000733R00;

Caltrans' comments:

Status: CLO

Date: 19-Aug-2010

The proposed resolution is acceptable. This NCR is considered closed.

Submitted by: Woo, Laraine

Attachment(s): NPR CT Comments

Date: 19-Aug-2010



No. B-838

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-08-11

REGARDING: NCR-000770(ZPMC-0732)

ZPMC is providing the NDT record show the missed indication has been repaired and was tested to be acceptable. ZPMC QA has discussed this issue with the head of the NDT department and to address the issue through greater oversight by supervisors. Based on this ZPMC is requesting closure of this NCR.

s

ATTACHMENT:

NCR-000770(ZPMC-0732)

B787-UT-13554 R1

A handwritten signature in black ink, appearing to be 'J. M.' or similar, written in a cursive style.

8/11/10



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: 21-Jun-2010

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0732

Job Name: SAS Superstructure
Document No: 05.03.06-000728

Reference Description: QA found a 75mm long "class A" UT rejectable indication in a Suspender Bracket at PP70

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 (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB70W (Segment 8CW), this QA Inspector discovered the following issues:

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Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0732

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

NCT

(Continued Page 2 of 2)

File: 05.03.06

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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-000770

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 20-Jun-2010

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

NCR #: ZPMC-0732

Type of problem:

Welding **Concrete** **Other**

Welding **Curing** **Procedural**

Bridge No: 34-0006

Joint fit-up **Coating** **Other**

Component: Suspender Bracket for Segment 8CW

Procedural **Procedural** **Description:** Missed UT Indication by QC

Reference Description: QA found a 75mm long "class A" UT rejectable indication in a Suspender Bracket at PP70

Description of Non-Conformance:

- During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB70W (Segment 8CW), this QA Inspector discovered the following issues:
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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AWS D1.5-02 Section 6: Table 6.3 specifies a class "A" indication as having a rating of 8dbs and under for material thicknesses 21mm through 38mm.

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."

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jan

Time and method of notification: 1630 hours, 06/20/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1030 hours, 06/21/10, Verbal

QC Inspector's Name: Chan Zhoe

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Devey, Jim

SMR

ZPMC-0732



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-13554R1 DATE 2010.07.11 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: SUSPENDER BRACKET DRAWING NO.: SB70W 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
 FCAW T JOINT Dec. 28ST, 2010

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T2 25/35mm

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
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	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	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y			
SB016-070-005	1R1	70													ACC.	100%

AFTER B-WR13678

BLANK

EXAMINED BY 主探 Tang Dingshan 20/0.07.11 REVIEWED BY 审核 XU Romy gang 20/0.07.11
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM 用户CUSTOMER
 签字 SIGN / 日期 DATE 签字 SIGN / 日期 DATE

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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, P.R. China**Report No:** NCS-000721**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 17-Aug-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0732**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: 20-Jun-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB70W (Segment 8CW), this QA Inspector discovered the following issues:

- One class "A" UT rejectable longitudinal linear indication measuring approximately 75mm in length.
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- The Notice of Witness Inspection (NWIT) No. is 006019. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor supplied post repair NDT documentation verifying repair meets Contract weld quality requirements. ZPMC has instituted disciplinary actions as well as incentives to prompt inspectors to perform more thorough inspections.

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: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer