

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-000892**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Nov-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0854**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 11AW Counterweight connection plate
Procedural	Procedural	Description: QA found 2 missed UT indications	

Reference Description: QA found 2 missed UT indications after ZPMC had tested and accepted the weld at Segment 11AW countweight connection plate

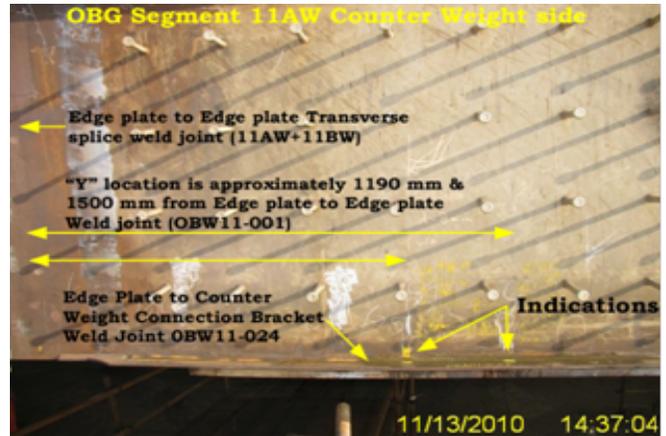
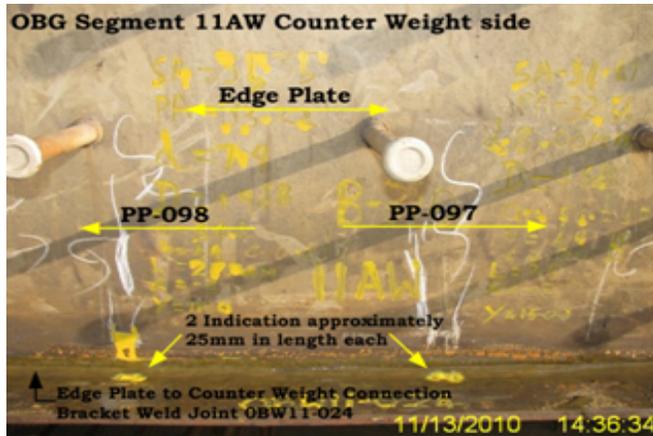
Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Segment 11AW, this QA Inspector discovered the following issues:

- Two (2) Class "A" longitudinal linear indication measuring approximately 25mm in length each.
- The indications dB rating are +9dB, and +6dB.
- The thickness of the plate is 10 mm; the depth of both of the indications is approximately 8 mm.
- Both indications are located on the weld joint identified as OBW11-024.
- The weld is a Complete Joint Penetration (CJP) corner joint joining Edge Plate to Counter Weight Connection Bracket.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- These indications are clearly marked on or near the weld.
- OBG Segment 11AW is located on Trial Assembly Yard.
- The "Y" location for these indications is approximately 1190 mm & 1500 mm from Edge plate to Edge plate Transverse splice Weld joint (OBW11-001).
- The Notice of Witness Inspection (NWIT) No. is 007333. 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 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 10dbs and under for material thicknesses 8mm through 20mm.

-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: Santhosh Ramakrishna

Name of individual from Contractor notified: Ding Xing Chi

Time and method of notification: 1100 hours, 11-13-10, Verbal

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 1800 hours, 11-14-10, Verbal

QC Inspector's Name: Wang Lu

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 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

NCT

(*Continued Page 2 of 2*)

cc: Rick Morrow, Gary Pursell, 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: 05.03.06-000849

Subject: NCR No. ZPMC-0854

Dated: 29-Nov-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000846 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has removed, and repaired the indication and has performed NDT on the area to ensure that the defects were removed

ZPMC has removed, and repaired the indication and has performed NDT on the area to ensure that the defects were removed. The attached NDT documents are provided for verification. ABFJV has identified the inspector responsible and will remove him if he shows a pattern of continued missed indications. ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000846R00;

Caltrans' comments:

Status: CLO

Date: 30-Nov-2010

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

Submitted by: Woo, Laraine

Date: 30-Nov-2010

Attachment(s):



No. B-936

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-11-25

REGARDING: NCR-000892(ZPMC-0854)

ZPMC acknowledged this problem and has issued an internal NCR. This indication has been removed, repaired and re-tested to be acceptable. ZPMC is providing the NDT record and is requesting closure of this NCR.

ATTACHMENT:

NCR-000892(ZPMC-0854)

B787-UT-16399 R1

[Handwritten signature]

11/25/2010



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-Nov-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: 05.03.06-000849

Subject: NCR No. ZPMC-0854

Reference Description: QA found 2 missed UT indications after ZPMC had tested and accepted the weld at Segment 11AW countweight connection plate

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: 11

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Segment 11AW, Caltrans QA Inspector discovered the following issues:

- Two (2) Class "A" longitudinal linear indication measuring approximately 25mm in length each.
- The indications dB rating are +9dB, and +6dB.
- The thickness of the plate is 10 mm; the depth of both of the indications is approximately 8 mm.
- Both indications are located on the weld joint identified as OBW11-024.
- The weld is a Complete Joint Penetration (CJP) corner joint joining Edge Plate to Counter Weight Connection Bracket.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- These indications are clearly marked on or near the weld.
- OBG Segment 11AW is located on Trial Assembly Yard.
- The "Y" location for these indications is approximately 1190 mm & 1500 mm from Edge plate to Edge plate Transverse splice Weld joint (OBW11-001).
- The Notice of Witness Inspection (NWIT) No. is 007333. 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 100% UT inspection of this weld.

Action Required and/or Action Taken:

Proposed 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: Laraine Woo Transportation Engineer

Attachments: ZPMC-0854

NCT

(Continued Page 2 of 2)

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey
File: 05.03.06

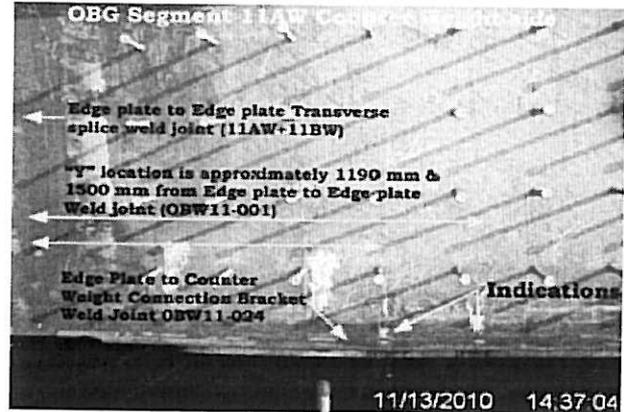
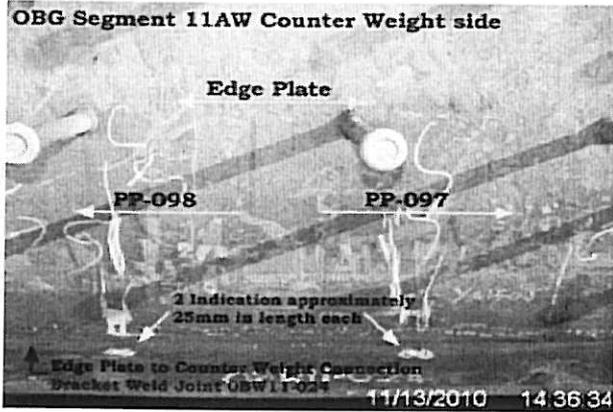
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICESOffice of Structural Materials
Quality Assurance and Source InspectionBay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000892**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Nov-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0854**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Segment 11AW Counterweight connection plateProcedural Procedural Description: QA found 2 missed UT indications**Reference Description:** QA found 2 missed UT indications after ZPMC had tested and accepted the weld at Segment 11AW countweight connection plate**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Segment 11AW, this QA Inspector discovered the following issues:

- Two (2) Class "A" longitudinal linear indication measuring approximately 25mm in length each.
- The indications dB rating are +9dB, and +6dB.
- The thickness of the plate is 10 mm; the depth of both of the indications is approximately 8 mm.
- Both indications are located on the weld joint identified as OBW11-024.
- The weld is a Complete Joint Penetration (CJP) corner joint joining Edge Plate to Counter Weight Connection Bracket.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- These indications are clearly marked on or near the weld.
- OBG Segment 11AW is located on Trial Assembly Yard.
- The "Y" location for these indications is approximately 1190 mm & 1500 mm from Edge plate to Edge plate Transverse splice Weld joint (OBW11-001).
- The Notice of Witness Inspection (NWIT) No. is 007333. 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 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 10dbs and under for material thicknesses 8mm through 20mm.

-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: Santhosh Ramakrishna
Name of individual from Contractor notified: Ding Xing Chi
Time and method of notification: 1100 hours, 11-13-10, Verbal
Name of Caltrans Engineer notified: Laraine Woo
Time and method of notification: 1800 hours, 11-14-10, Verbal
QC Inspector's Name: Wang Lu
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 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



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-16399R1 DATE 2010.11.13 PAGE 1 OF 2 Revision No: 0

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

ITEMS NAME: 部件名称	COUNTERWEIGHT BOX	DRAWING NO.: 图号	OBW11 加州工程编号
---------------------	----------------------	--------------------	-----------------

REFERENCING CODE 参考规范 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3)	PROCEDURE NO. 程序编号 ZPQC-UT-01
--	--	----------------------------------

WELDING PROCESS 焊接方法 SMAW	JOINT TYPE 焊缝类型 CORNER JOINT BUTT	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010
------------------------------	--------------------------------------	--

EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 AMERICA	MODEL NO. 样式编号 EPOCH -4B	SERIAL NO. 序列编号 51392712
--------------------------	-----------------------------	-----------------------------	-----------------------------

CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T2 10/20/28mm
---	-----------------------	--

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 a	Reference Level b	Attenuation Factor c	Indication Rating d	LOCATION OF DISCONTINUITY 不连续位置(mm)						
									Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From'X 距X	From'Y 距Y		
OBW11-023	1R1	70				62								ACC.	100%
	2R1	70				62								ACC.	100%
OBW11-024	1R1	70				53								ACC.	100%
	2R1	70				53								ACC.	100%
OBW11-025	1R1	70				52								ACC.	100%
	2R1	70				52								ACC.	100%
	3R1	70				52								ACC.	100%
	4R1	70				52								ACC.	100%

EXAMINED BY 主探 <i>Cui zheng hua</i>	REVIEWED BY 审核 <i>Ding Bao Hua</i>
--	---------------------------------------

LEVEL - II SIGN / DATE <i>2010.11.13</i>	LEVEL - II SIGN / DATE <i>2010.11.13</i>
--	--

质量经理 / QCM <i>Wujianhua</i>	用户CUSTOMER
--------------------------------	------------

签字 SIGN / 日期 DATE <i>2010.11.13</i>	签字 SIGN / 日期 DATE
-------------------------------------	-------------------

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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000815**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 29-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0854**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: 13-Nov-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Segment 11AW, this QA Inspector discovered the following issues:

- Two (2) Class "A" longitudinal linear indication measuring approximately 25mm in length each.
- The indications dB rating are +9dB, and +6dB.
- The thickness of the plate is 10 mm; the depth of both of the indications is approximately 8 mm.
- Both indications are located on the weld joint identified as OBW11-024.
- The weld is a Complete Joint Penetration (CJP) corner joint joining Edge Plate to Counter Weight Connection Bracket.
- The weld is designated as Non Seismic Performance Critical Material (Non SPCM).
- These indications are clearly marked on or near the weld.
- OBG Segment 11AW is located on Trial Assembly Yard.
- The "Y" location for these indications is approximately 1190 mm & 1500 mm from Edge plate to Edge plate Transverse splice Weld joint (OBW11-001).
- The Notice of Witness Inspection (NWIT) No. is 007333. 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 100% UT inspection of this weld.

Contractor's proposal to correct the problem:

Contractor will perform weld repair accordance with CWR. NDT will be performed after repair. NDT report will prove the weld is free of indications.

Corrective action taken:

Contractor repaired the weld according to CWR. NDT performed after repair. NDT results show the weld is acceptable.

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:

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 Wahbeh, Mazen 818-292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer