

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-000703**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0670**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 9BW bottom panel
Procedural	Procedural	Description: Missed UT Indication by QC	

Reference Description: Missed UT indication by QC on Segment 9BW BP to BP CJP Joint**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

- Two (2) Class "A" indications measuring approximately 15mm in length each.
- The Indication ratings are +6dBs for both indications.
- The 2 indications are located on a weld joint identified as SEG051A-003.
- The weld is a Complete Joint Penetration (CJP) butt weld joining the Bottom plate BP95A (PL739A) to Bottom plate BP44A (PL715A).
- The thickness of the Bottom plate is 20mm.
- The "Y" locations are approximately 3160mm and 8880 mm from one edge of the bottom plate to PP76 East side.
- The indications are clearly marked by the QA on/near the weld.
- This weld joint is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 9BW is located in the outside yard on the west side of Bay 19.

The Notice of Witness Inspection Number (NWIT) is 005413. The indications are located inside the area that has been 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.

Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3: "Specifies a class A indication as having a db rating of +10 and lower for weld 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."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Vibin Kumar S
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1730 hours, 03/25/10, Email
Name of Caltrans Engineer notified: Sean Eagen
Time and method of notification: 1400 hours, 03/26/10, Email
QC Inspector's Name: Zhang Wei
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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	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: 26-Mar-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: 05.03.06-000660

Subject: NCR No. ZPMC-0670

Reference Description: Missed UT indication by QC on Segment 9BW BP to BP CJP Joint

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:** 09

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

- Two (2) Class "A" indications measuring approximately 15mm in length each.
- The Indication ratings are +6dBs for both indications.
- The 2 indications are located on a weld joint identified as SEG051A-003.
- The weld is a Complete Joint Penetration (CJP) butt weld joining the Bottom plate BP95A (PL739A) to Bottom plate BP44A (PL715A).
- The thickness of the Bottom plate is 20mm.
- The "Y" locations are approximately 3160mm and 8880 mm from one edge of the bottom plate to PP76 East side.
- The indications are clearly marked by the QA on/near the weld.
- This weld joint is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 9BW is located in the outside yard on the west side of Bay 19.

The Notice of Witness Inspection Number (NWIT) is 005413. The indications are located inside the area that has been 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-0670

NCT

(*Continued Page 2 of 2*)

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

NCR PROPOSED RESOLUTION

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

Dated: 30-Mar-2010

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Document No.: ABF-NPR-000641 **Rev:** 00

Ref: 05.03.06-000660

Subject: NCR No. ZPMC-0670

Contractor's Proposed Resolution:

Reference Resolution: In this particular case, the Department's inspector performed the inspection in a different location than ZPMC and produced different results.

In this particular case, the Department's inspector performed the inspection in a different location than ZPMC and produced different results. In this case, the indications will be repaired by ZPMC but the incident should not have become an NCR because the indications were not missed by ZPMC as they did not scan from that particular weld face. Based on this ZPMC, requests that this NCR be closed.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000641R00;

Caltrans' comments:

Status: REJ

Date: 06-Apr-2010

The weld joint in question requires 100% UT per the requirements of the Special Provisions. Regardless of which weld face ZPMC QC scanned, the Department's QA inspection has found missed indications in this weld while scanning per the requirement of the ASW Code. The Contractor shall perform the necessary repairs and provided NDT documentation for this weld to close this NCR.

Submitted by: Eagen, Sean

Date: 06-Apr-2010

Attachment(s):



No. B-716

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-30

REGARDING: NCR-000703 (ZPMC-0670)

ZPMC couldn't admit the NCR. As what we clarified on site, CT's inspector did UT different place from ZPMC (CT did UT in bottom plate from inside Segment and ZPMC did UT in bottom plate from outside Segment), and CT's inspector himself also thought it just IR not NCR on that time. So ZPMC is requesting this NCR to be withdrawn.

ATTACHMENT:

NCR-000703 (ZPMC-0670)

Zhangwei

3-30-2010.

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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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, P.R. China

Report No: NCR-000703

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 25-Mar-2010

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

NCR #: ZPMC-0670

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: Segment 9BW bottom panel
 Procedural Procedural Description: Missed UT Indication by QC

Reference Description: Missed UT indication by QC on Segment 9BW BP to BP CJP Joint

Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Vibin Kumar S
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1730 hours, 03/25/10, Email
Name of Caltrans Engineer notified: Sean Eagen
Time and method of notification: 1400 hours, 03/26/10, Email
QC Inspector's Name: Zhang Wei
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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	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 Date: 26-Mar-2010
 375 BURMA ROAD Contract No: 04-0120F4
 OAKLAND CA 95607 04-SF-80-13.2 / 13.9
 Dear: Mr. Charles Kanapicki Job Name: SAS Superstructure
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager Document No: 05.03.06-000660
 Subject: NCR No. ZPMC-0670

Reference Description: Missed UT indication by QC on Segment 9BW BP to BP CJP Joint

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: 09

Remarks:

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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-0670

02.02.15.04
 05.03.06-000660.NCT

Received
 NCT-000660 26 Mar 10 Page 1 of 2

NCT

(Continued Page 2 of 2)

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

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000660

Subject: NCR No. ZPMC-0670

Dated: 20-Apr-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000641 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the indication and is attaching the repair report and NDT to show the weld is acceptable. ZPMC has also issued an internal NCR to document this incident.

ZPMC has repaired the indication and is attaching the repair report and NDT to show the weld is acceptable. ZPMC has also issued an internal NCR to document this incident. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000641R01;

Caltrans' comments:

Status: CLO

Date: 25-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0670 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 25-Apr-2010



No. B-730

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-4-14

REGARDING: NCR-000703(ZPMC-0670)

ZPMC acknowledged this problem and has issue internal NCR. ZPMC is providing WRR and NDT record which shows that the weld is now acceptable after repair. Based on this ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000703(ZPMC-0670)

B-WR11444

B787-UT-12084 R1

Long *zw*
4/14/10



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	SEG051A	报告编号 Report No.	B-WR11444
合同号 Contract No.:	04-0120F4	部件名称 Items Name	9BW BOTTOM PLATE	NDT报告编号 Report No.of NDT	B787-UT-12084
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

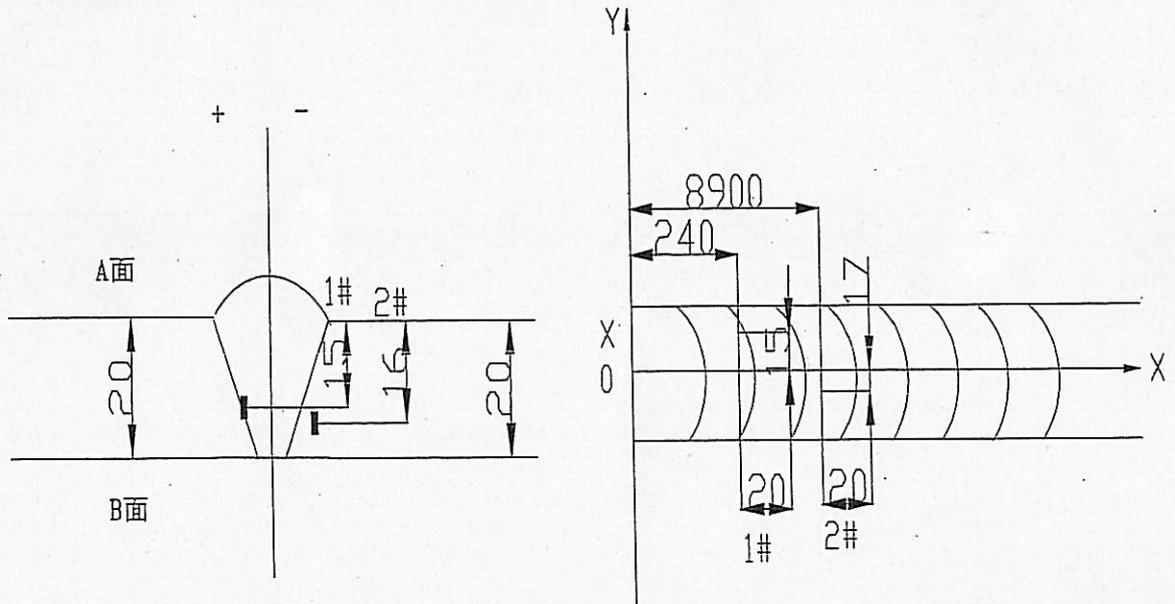
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG051A-003

检验员 (Inspector) Jin Feng 日期(Date): 2010.03.26

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SEG051A-003

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): *Lishigang* 日期(Date): 3.29

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. 焊前对修补区域进行VT检测保证缺陷完全被消除;
 4. 将修补区域打磨到与母材或邻近焊缝平齐;
 5. 对焊缝进行UT检测, 检测范围为返修区域以及其两端各延长50mm.
-
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. Verify with VT no defects remain in the weld joint prior to welding;
 4. Grind the repaired area flush with base metal or the adjacent weld;
 5. Perform UT inspection to the weld along with 50mm on each end of the repair area;

工艺: *hexiaolin*
Technical engineer

审核:
Approved by

日期 10.3.29
Date



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	SEG051A	报告编号 Report No.	B-WR11444
合同号 Contract No.:	04-0120F4	部件名称 Items Name	9BW BOTTOM PLAT E	NDT报告编号 Report No.of NDT	B787-UT-12084
项目编号 Project No.:	ZP06-787				

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): *Li Honggang* 日期(Date): *3.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-FCM-Repair WPS-345-FCAW-1 G(1F)-FCM-Repair WPS-345-SMAW-4 G(4F)-FCM-Repair	工艺员 technologist	<i>Hexiao Lin</i> <i>3.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>76°C</i>	返修的缺陷 Description of discontinuity	<i>3-F</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>110°C</i>
最大碳刨深度 Max. depth of gouging	<i>6mm</i>	碳刨总长 Total length of gouging	<i>240mm</i>
焊工 welder	<i>205718</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>142</i>	焊接电压 Voltage	<i>244</i>
		焊接位置 position	<i>4G</i>
		焊接速度 Speed	<i>128</i>

返修后检查

Inspection After repairing:

外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>Li Yanhua</i> <i>07120701</i>	日期 Date	<i>2010-04-05</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Zhang</i>	日期 Date	<i>2010.4.12</i>

见证:

Witness/Review:

备注:

Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-12084 DATE 2010.03.26 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787		CONTRACTOR: CALTRANS	
ITEMS NAME: 9BW BOTTOM PLATE 部件名称	DRAWING NO.: SEG051A 图号	CALTRANS CONTRACT NO.: 04-0120F4 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 BUTT	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2010	
EQUIPMENT 设备 UT SCOPE	MANUFACTURER 制造商 PANAMETRICS	MODEL NO. 样式编号 EPOCH-4B	SERIAL NO. 序列编号 071565311, 061488510, 061495811, 070152011,
CALIBRATION BLOCK 试块 AWS IIV BLOCK TYPE II	COUPLANT 耦合剂 C.M.C	MATERIAL/THICKNESS 材料厚度 A709M-345T2-X 20mm	

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		
SEG051A-003	1	70	A	2	42	32	4	+6	20	74	15	+15	240	REJ.	100%
	2	70	A	1	40	32	2	+6	20	49	16	-17	8900	REJ.	100%

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EXAMINED BY 主探 <i>Jin Feng Zou - 03.26</i>	REVIEWED BY 审核 <i>Wu Chao 10.03.26</i>
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



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-12084R1 DATE 2010.04.12 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: 9BW BOTTOM PLATE DRAWING NO.: SEG051A 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 BUTT 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 IIV BLOCK TYPE II C.M.C A709M-345T2-X 20mm

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
SEG051A-003	1R1	70				32									ACC.	100%
	2R1	70				32									ACC.	100%

AFTER B-WR11444

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EXAMINED BY 主探 <i>Jim Feng</i> LEVEL - II SIGN DATE 10.27.12	REVIEWED BY 审核 <i>Su Wei</i> LEVEL - II SIGN / DATE 12.24.12
质量经理 / QCM _____ 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE



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: 26-Mar-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: 05.03.06-000660

Subject: NCR No. ZPMC-0670

Reference Description: Missed UT indication by QC on Segment 9BW BP to BP CJP Joint

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: 09

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

- Two (2) Class "A" indications measuring approximately 15mm in length each.
- The Indication ratings are +6dBs for both indications.
- The 2 indications are located on a weld joint identified as SEG051A-003.
- The weld is a Complete Joint Penetration (CJP) butt weld joining the Bottom plate BP95A (PL739A) to Bottom plate BP44A (PL715A).
- The thickness of the Bottom plate is 20mm.
- The "Y" locations are approximately 3160mm and 8880 mm from one edge of the bottom plate to PP76 East side.
- The indications are clearly marked by the QA on/near the weld.
- This weld joint is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 9BW is located in the outside yard on the west side of Bay 19.

The Notice of Witness Inspection Number (NWIT) is 005413. The indications are located inside the area that has been 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-0670

NCT

(Continued Page 2 of 2)

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

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: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000703**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0670**Type of problem:**Welding Concrete Other Welding Curing Procedural **Bridge No:** 34-0006Joint fit-up Coating Other **Component:** Segment 9BW bottom panelProcedural **Procedural** **Description:** Missed UT Indication by QC**Reference Description:** Missed UT indication by QC on Segment 9BW BP to BP CJP Joint**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

- Two (2) Class "A" indications measuring approximately 15mm in length each.
- The Indication ratings are +6dBs for both indications.
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- OBG Segment 9BW is located in the outside yard on the west side of Bay 19.

The Notice of Witness Inspection Number (NWIT) is 005413. The indications are located inside the area that has been 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.

Applicable reference:

AWS D1.5-2002, Section 6, Table 6.3: "Specifies a class A indication as having a db rating of +10 and lower for weld 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."

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: Vibin Kumar S
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1730 hours, 03/25/10, Email
Name of Caltrans Engineer notified: Sean Eagen
Time and method of notification: 1400 hours, 03/26/10, Email
QC Inspector's Name: Zhang Wei
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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric	SMR
Reviewed By: Wahbeh, Mazen	SMR

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, P.R. China**Report No:** NCS-000670**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0670**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-Mar-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of weld located on Segment 9BW, this QA Inspector discovered the following issue:

- Two (2) Class "A" indications measuring approximately 15mm in length each.
- The Indication ratings are +6dBs for both indications.
- The 2 indications are located on a weld joint identified as SEG051A-003.
- The weld is a Complete Joint Penetration (CJP) butt weld joining the Bottom plate BP95A (PL739A) to Bottom plate BP44A (PL715A).
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- This weld joint is designated as Seismic Performance Critical Member (SPCM).
- OBG Segment 9BW is located in the outside yard on the west side of Bay 19.

The Notice of Witness Inspection Number (NWIT) is 005413. The indications are located inside the area that has been 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:

The Contractor has issued an internal NCR in regards to this issue and has submitted post repair NDT records verifying the weld is in conformance with Contract weld quality requirements.

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 Jim Simonis , who represents the Office of Structural Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer