

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, P.R. China

Report No: NCR-000394

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Aug-2009

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

NCR #: ZPMC-0368

Type of problem:

Welding **Concrete** **Other**
Welding **Curing** **Procedural**
Joint fit-up **Coating** **Other**
Procedural **Procedural** **Description:**

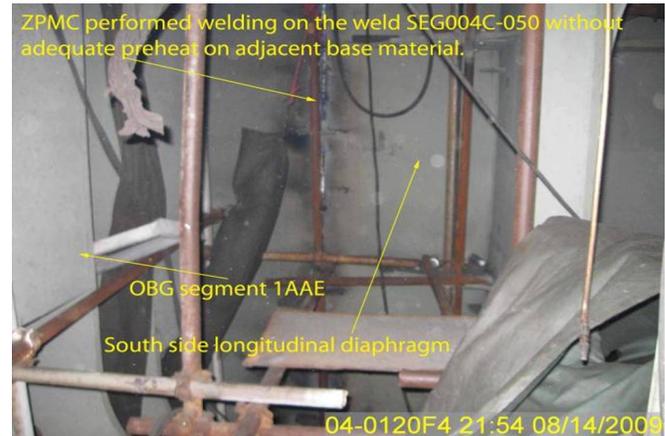
Bridge No: 34-0006

Component: Segment Splice Weld Joint 1AAE/1AE at LD

Reference Description: Welding without applying proper preheating as required by the WPS

Description of Non-Conformance:

During the random visual inspection this Caltrans Quality Assurance Inspector (QA) observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA Inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.



Applicable reference:

Welding Procedure Specification WPS-B-T-2233-B-U3-F, minimum preheat temperature required is 65 degree Celsius.

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Wang Zhong Yuan

Time and method of notification: 20:15 hours, verbal

Name of Caltrans Engineer notified: Ching Chao

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 08:00 hours, verbal

QC Inspector's Name: Chen Bo

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

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: 01-Sep-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: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Reference Description: Welding without applying proper preheating as required by the WPS

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:** 01

Remarks:

During the random visual inspection this Caltrans Quality Assurance Inspector (QA) observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA Inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.

Action Required and/or Action Taken:

Submit repair plan for the engineer's approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0368

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Dated: 21-Sep-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000364 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has advised ZPMC QA supervision to instruct the QC personnel to strictly monitor the pre-heat and interpass conditions

ZPMC production personnel did not apply the correct amount of pre-heat nor did they monitor the interpass temperature. ABF has advised ZPMC QA supervision to instruct the QC personnel to strictly monitor the pre-heat and interpass conditions as not meeting these requirements is directly related to welds being rejected for linear type indications. As for the specific welds related to this NCR, ZPMC will perform the necessary NDT inspections and submit the required documentation at a later date for closure of this NCR.

Submitted by: Flowers, Michael

Attachment(s): ABF-NPR-000364R00

Caltrans' comments:

Status: AAP

Date: 22-Sep-2009

Will review and confirm the acceptance when the repair documentation is submitted.

Submitted by: Chao, Ching

Attachment(s):

Date: 22-Sep-2009

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Dated: 26-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000364 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has submitted documentation of NDT which shows the weld is acceptable despite the lower preheat temperature of the base metal. The documentation is available on the electronic database.

ZPMC has submitted documentation of NDT which shows the weld is acceptable despite the lower preheat temperature of the base metal. The documentation is available on the electronic database. ZPMC requests closure of the NCR.

Submitted by:

Attachment(s): ABF-NPR-000364R01

Caltrans' comments:

Status: AAP

Date: 11-Nov-2009

There is a revised NPR submitted for this NCR from the contractor prior to Engineer's response. Please see the Engineer's response for the latest NPR.

Submitted by: Chao, Ching

Date: 11-Nov-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Dated: 28-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000364 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has provided NDT documentation showing that the weld is sound and unaffected by the lack of preheat. ZPMC requests closure of this NCR.

ZPMC has provided NDT documentation showing that the weld is sound and unaffected by the lack of preheat. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000364R02;

Caltrans' comments:

Status: CLO

Date: 11-Nov-2009

The required NDT reports have been verified to be sufficient in the QA database.

Submitted by: Chao, Ching

Date: 11-Nov-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Dated: 09-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000364 **Rev:** 03

Contractor's Proposed Resolution:

Reference Resolution: SEG004C-050 has been tested and accepted by ABFJV, ZPMC and Caltrans subsequent to the NCR. This acceptance is documented in QA Approval Form # 11779.

SEG004C-050 has been tested and accepted by ABFJV, ZPMC and Caltrans subsequent to the NCR. This acceptance is documented in QA Approval Form # 11779. Based on this ZPMC is requesting closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000364R03;

Caltrans' comments:

Status: CLO

Date: 13-Dec-2009

The green tag (QA Approval form) itself is not sufficient to close the NCR. However, the other documentation submitted has been reviewed by the Engineer and is found to be acceptable.

Submitted by: Chao, Ching

Attachment(s):

Date: 13-Dec-2009



No. B-482

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-10-28

REGARDING: NCR-000394 (ZPMC-0368)

With this letter of response, ZPMC requests closure for Caltrans NCR-000394 (ZPMC-0368). We agree what described in the non-conformance report, and have trained our QC inspector that should be control strictly with the preheat temperature during the course of the weld. By the way we are providing the final UT report to support that the weld has been accepted by visual and NDT inspection.

so base on the above explanation, ZPMC applies to close the caltrans's report NCR-000394 (ZPMC-0368).

Please reference attached document for acceptance and closure the NCR-000394 (ZPMC-0368).

ATTACHMENT:

NCR-000394 (ZPMC-0368)

ZPMC internal NCR

The final VT/UT report

Zhao Shuangbin

2009. 10. 28



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B 项目名称: 美国加州海湾大桥		NCR Number: NCR 编号: NCR-B-258 (ZPMC-0368)
Item: Welding without proper preheating 名称描述: 焊前无预热	Item Number: 件号:	Drawing: 图号: 1AAE/1AE
Location: 位置: 后场总拼	Date: 日期: 2009-9-14	

Description of Nonconformance:
不符合项状态描述:

During the random visual inspection this Caltrans Quality Assurance Inspector observed ZPMC personnel performing Flux Core Arc Welding on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.

加州检验员发现 ZPMC 使用 FCAW 焊接 SEG004-050 这条焊缝时为进行必须的预热, 加州检验员用 65 度的测温笔进行测温时都发现笔没有融化。

Work By: Zhuangy chuang 9.14
施工方: Zhuangy chuang 9.14

Prepared by: Wayhu 2009.9.14
准备: Wayhu 2009.9.14

Reviewed by QCE: Wuoslou 9.14
质量工程师批准: Wuoslou 9.14

Drawing Error 图纸错误 Material Defect 材料缺陷 Fabrication Error 制作错误 Other 其他原因

Disposition: Use as is Repair Reject
处理措施: 回用 返修 拒收

Recommendation:
建议:

Prepared by: _____ Approved by QCA: _____
准备 质量经理批准

Reason for Nonconformance:
不符合原因:

由于焊接 SEG004-050 这条焊缝时预热未到位。
Preheat inadequately at weld SEG004-050.

Prevention of Re-occurrence:
预防措施:

加强现场监督和检查。
Enhance supervision and inspection on-site.

Approved by/批准: Gao Jun 09.9.14

Technical Justification for Use-As-Is/Repair: 回用或返修的技术依据:	<input type="checkbox"/> Attachment 附件	<input type="checkbox"/> Non-attachment 无附件
Reviewed /批准: _____		
Verification: 确认:	<input type="checkbox"/> Acceptable 可接受	<input type="checkbox"/> Unacceptable 不可接受
Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____		

#R787-QCP-1300



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: 01-Sep-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: 05.03.06-000357

Subject: NCR No. ZPMC-0368

Reference Description: Welding without applying proper preheating as required by the WPS

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: 01

Remarks:

During the random visual inspection this Caltrans Quality Assurance Inspector (QA) observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA Inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.

Action Required and/or Action Taken:

Submit repair plan for the engineer's approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0368

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

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: 13.2/13.9

File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000394

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Aug-2009

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

NCR #: ZPMC-036

Type of problem:

Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:

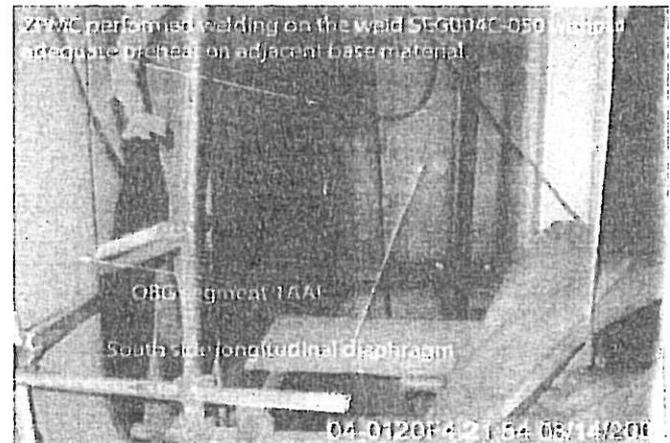
Bridge No: 34-0006

Component: Segment Splice Weld Joint 1AAE/1AE at LD

Reference Description: Welding without applying proper preheating as required by the WPS

Description of Non-Conformance:

During the random visual inspection this Caltrans Quality Assurance Inspector (QA) observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA Inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.



Applicable reference:

Welding Procedure Specification WPS-B-T-2233-B-U3-F, minimum preheat temperature required is 65 degree Celsius.

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Wang Zhong Yuan

Time and method of notification: 20:15 hours, verbal

Name of Caltrans Engineer notified: Ching Chao

QUALITY ASSURANCE --- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 08:00 hours, verbal

QC Inspector's Name: Chen Bo

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



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-8978 DATE 2009.09.29 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: OBG PLATE PANEL DRAWING NO.: OBE1 CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 SPLICE 图号 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 FCAW JOINT TYPE 焊缝类型 BUTT CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST, 2009

EQUIPMENT 设备 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-345 35/45mm

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		
SEG004C-050		70				33								ACC.	100%

BLANK

EXAMINED BY 主探 Sun Yin 09.09.29 REVIEWED BY 审核 Harry Tin 09.09.29
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM 用户 CUSTOMER
 签字 SIGN / 日期 DATE J.P. 10.05 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-000365**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0368**Type of problem:**

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

Date the Non-Conformance Report was written: 14-Aug-2009**Description of Non-Conformance:**

During the random visual inspection this Caltrans Quality Assurance Inspector (QA) observed ZPMC personnel performing Flux Core Arc Welding (FCAW) on the weld SEG004C-050, south side longitudinal diaphragm transverse segment splice weld joint of 1AAE to 1AE, without adequate preheating of the adjacent base material. This QA Inspector observed a 65 degree Celsius Tempstick did not melt when applied to the adjacent base material.

Contractor's proposal to correct the problem:

Perform required NDT.

Corrective action taken:

ABF performed the required NDT for the weld in question. NDT reports show that the weld is in conformance with the Contract requirements.

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 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