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-000175
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 18-Aug-2008
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0158

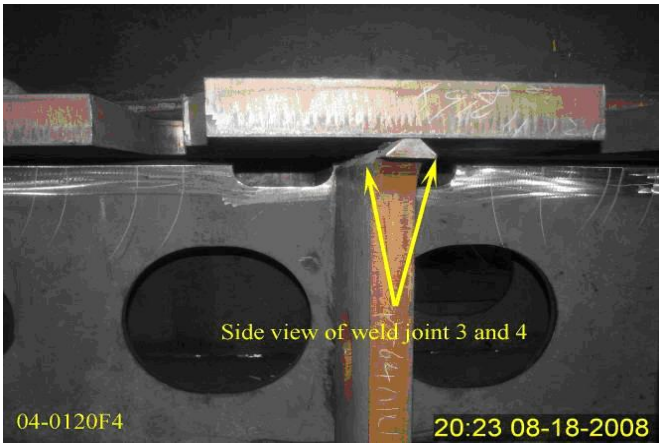
Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** Tower
Procedural	☑	**Procedural**	☐	**Descripton:**		NSD1-SA322-B/B-3 & 4

Reference Description: Unqualified Welder

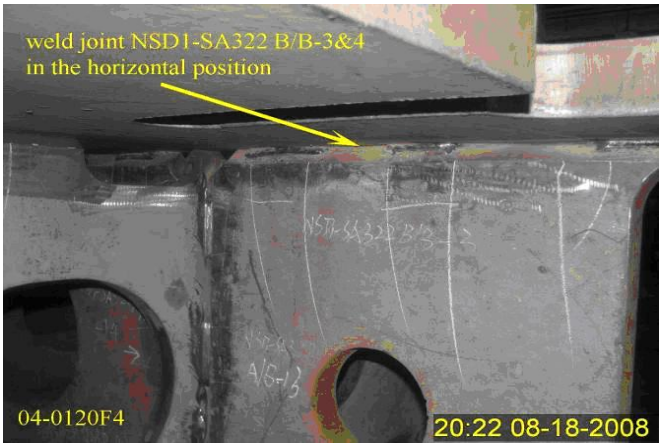
Description of Non-Conformance:

ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:
AWS D1.5-2002, Section 5.22.1, Table 5.6
Who discovered the problem: Quality Assurance (QA) Inspector, Kenneth Riley
Name of individual from Contractor notified: ABFJV Quality Control Inspector, Mike Williams
Time and method of notification: 18-AUG-08, Via phone @ approximately 2030hrs
Name of Caltrans Engineer notified: Scott Kennedy, Structure Representative
Time and method of notification: 21-AUG-08, at approximately 1330 hours
QC Inspector's Name: Xu Jun (Erick)
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 Ryan Smith, who represents the Office of Structural Materials for your project.

Inspected By:	Smith,Ryan	SMR
Reviewed By:	Smith,Ryan	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:**	22-Aug-2008
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanapicki	**Job Name:**	SAS Superstructure
Attention:	Mr. Dave Williams Consultant	**Document No:**	05.03.06-000147
Subject:	NCR No. ZPMC-0158		

Reference Description: Unqualified Welder / Double Diaphragm

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:** 01

Remarks:

ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance that documenting that the weld placed is in compliance with the contract requirements. In addition to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to indentify the lack of welder qualification for the weld position and once the lack of the qualification was indentified to allow the welder to continue. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0158

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000147

Subject: NCR No. ZPMC-0158

Dated: **11-Sep-2008**
Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No.: **ABF-NPR-000146 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC specifically assigned the welder to this weld as he is certified in the 4G position.

ZPMC takes exception to this NCR as this weld is shown to be in the 4G position per AWS D1.5 figure 5.5 position C. ZPMC specifically assigned the welder to this weld as he is certified in the 4G position.

Submitted by:

Attachment(s): ABF-NPR-000146R00

Caltrans' comments:

Status: CLO

Date: 29-Sep-2008

The Contractor's response is acceptable. After further discussion, the weld in question is in the 4G position, and the welder was qualified in that position. The Department concurs that Non-Conformance ZPMC-0158 is closed.

Submitted by: Wright, Doug

Date: 29-Sep-2008

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000147

Subject: NCR No. ZPMC-0158

Dated: **24-Sep-2008**
Contract No.: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No.: **ABF-NPR-000146 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC takes exception to this NCR, ZPMC specifically assigned the welder to this weld as he is certified in the 4G position.

ZPMC takes exception to this NCR as this weld is shown to be in the 4G position per AWS D1.5 figure 5.5 position C. ZPMC specifically assigned the welder to this weld as he is certified in the 4G position. Please see additional attached data.

Submitted by:

Attachment(s): ABF-NPR-000146R01;

Caltrans' comments:

Status: CLO

Date: 29-Sep-2008

The Contractor's response is acceptable. After further discussion, the weld in question is in the 4G position, and the welder was qualified in that position. The Department concurs that Non-Conformance ZPMC-0158 is closed.

Submitted by: Wright, Doug

Date: 29-Sep-2008

Attachment(s):

American Bridge / FLUOR
A JOINT VENTURE

3740 Pudong Nanlu
Shanghai, China 200120

LETTER OF TRANSMITTAL

To: California Dept. of Transportation
666 Feng Bin Road, Rm 708
Changxing Island, Shanghai
Attention: Mr. Pete Siegenthuler
Project: S.F.O.B.B.
Job # 04-0120F4

Transmittal No: AFC-CAL-TRN-001326
Date: 9/16/2008

Enclosed:

Qty.	Item	Qty.	Item
	For Closure		
1	ZPMC Transmittal TL-001580		
	NCR ZPMC-0158		

Sender: [signature] Date: 9/16/08

Recipient: Albert Perez Date: 9-16-08

Please indicate receipt of the above mentioned items by signing and returning this transmittal to sender.

TL-001580

TRANSMITTAL LETTER

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 09/12/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: NCR-000175(ZPMC-0158)FOR CLOSURE

SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

(1) COPY OF LETTER OF RESPONSE WITH NO.T-017.
(2) COPY OF NCR WITH NUMBER NCR-000175(ZPMC-0158)
(3) COPY OF WPS-B-T-33(1)14.

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEGEMENT:

PLAN HOLDER	9/12/08 1435 DATE
ABFJV COMPANY	PHONE NO.

PLAN NUMBER: N/A
#R787-QCP-102

ZPMC

No. T-017

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-9-12

REGARDING: NCR-000175 (ZPMC-0158)

ZPMC received Caltrans' NCR-000158, it mentioned ZPMC welded on the Tower component number NSD1-SA322B/B-3&4(Double diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC QC was informed of this discrepancy, the welder was allowed by Mr.Xu Jun to perform welding again in the same position and weld joint.

ZPMC took exception to this NCR. ZPMC arranged the 4G (4F) welder to perform the tack welding in the overhead position, which CT inspector Kenneth Riley regarded as the horizontal position. But ZPMC looked into the AWS chapter 5 figure 5.5, and joint WT 65 & WT 66. ZPMC is pretty sure the position the welder performed in is the overhead position. So ZPMC did not commit any mistake as to this NCR. Please see the attached sketch and WPS for your reference.

So ZPMC hoped Caltrans can check again and withdraw this NCR.

ATTACHMENT:

NCR-000175 (ZPMC-0158)
WPS-B-T-33(1)14

Xujun 2008.9.12

ABF QCM
16 SEPT.08

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: 22-Aug-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000147

Subject: NCR No. ZPMC-0158

Reference Description: Unqualified Welder / Double Diaphragm

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:** 01

Remarks:

ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance that documenting that the weld placed is in compliance with the contract requirements. In addition to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to indentify the lack of welder qualification for the weld position and once the lack of the qualification was indentified to allow the welder to continue. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer
Attachments: ZPMC-0158

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe
File: 05.03.06

02.02;15.04

Received
NCT-000147 22 Aug 08

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

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-000175
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 18-Aug-2008
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0158

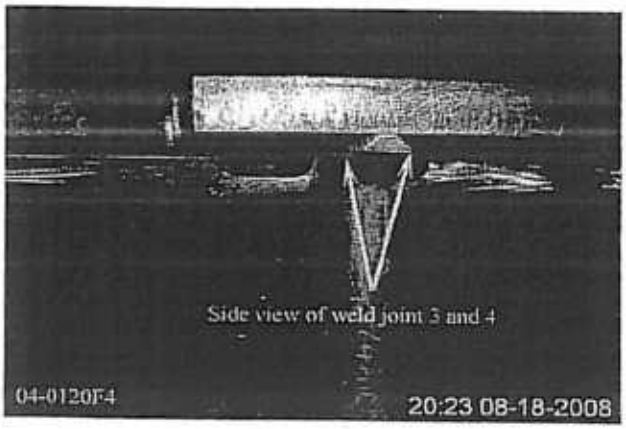
Type of problem:

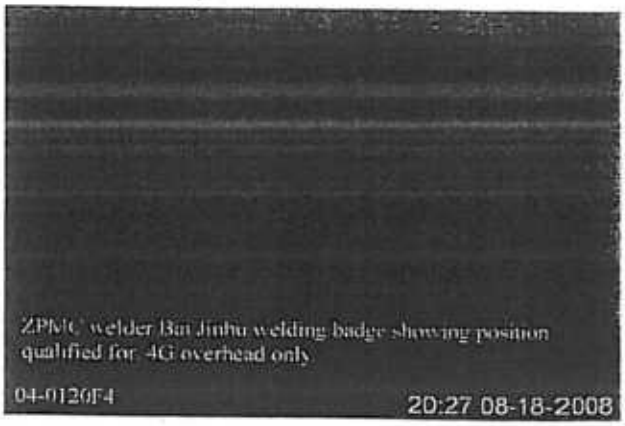
Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** Tower
Procedural	☑	**Procedural**	☐	**Descripton:**		NSD1-SA322-B/B-3 & 4

Reference Description: Unqualified Welder

Description of Non-Conformance:

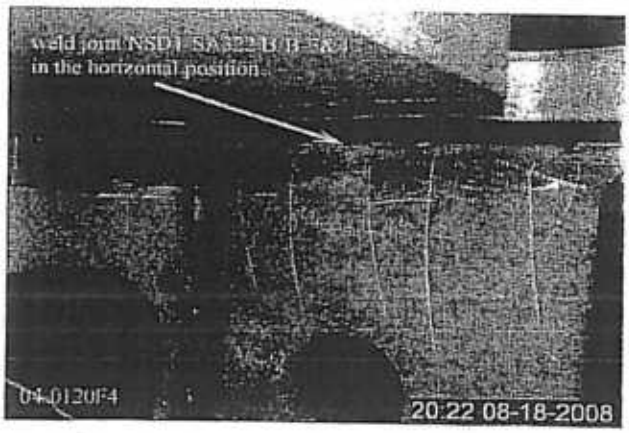
ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.





QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:
AWS D1.5-2002, Section 5.22.1, Table 5.6
Who discovered the problem: Quality Assurance (QA) Inspector, Kenneth Riley
Name of individual from Contractor notified: ABFJV Quality Control Inspector, Mike Williams
Time and method of notification: 18-AUG-08, Via phone @ approximately 2030hrs
Name of Caltrans Engineer notified: Scott Kennedy, Structure Representative
Time and method of notification: 21-AUG-08, at approximately 1330 hours
QC Inspector's Name: Xu Jun (Erick)
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 Ryan Smith, who represents the Office of Structural Materials for your project.

Inspected By:	Smith,Ryan	SMR
Reviewed By:	Smith,Ryan	SMR

ZPMC	焊接工艺规程 B* WELDING PROCEDURE SPECIFICATION	编号 No. WPS-B-T-33(1)14 (定位焊 tack weld) 有效期 Period of validity FCM：2007.5~2010.5 NON-FCM：2007.5~2012.5

母材技术条件（Material specification） A.709M HPS 485WT2/SHEAR LINK GRADE 485
焊接方法（Welding process） 药皮焊条手工电弧焊(SMAW)
手工或机械（Manual or machine or semi-auto） 手工(Manual)
焊接位置（Position of welding） 仰焊(4G.4F)
填充金属技术条件（Filler metal specification） AWS A5.5 填充金属级别（Filler metal classification） E9018M
填充金属牌号（Filler metal brand） Excalibur 9018M MR (Φ4.0)
焊剂（Flux） N/A
保护气体（Shielding gas） N/A 流率（Flow rate） N/A
单焊道或多焊道（Single or multiple pass） 多道(Multiple Pass)
单弧或多弧（Single or multiple arc） 单弧(Single arc)
焊接电流（Welding current） 直流(DC) 极性（Polarity） 反接(EP)
焊丝伸出长度（Electrode extension） N/A
焊接方向（Welding progression） N/A
根部处理（Root treatment） N/A
焊前最低预热温度和道间温度（Minimum preheat and interpass temperature before welding）
40℃ [T≤20mm] 100℃ [20mm<T≤40mm] 140℃ [40mm<T≤60mm] 160℃ [60mm<T
最高预热和道间温度（Preheat and interpass temperature Max） 230℃
后热温度(Postheat temperature) N/A
热输入（线能量）(Heat input) 最小(Min) 1.53KJ/mm

☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED
Pursuant to Section 5-1.02 of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Signed for Rick MacRae
Structure Representative
Date 10-1-2007

焊 接 工 艺
(Welding procedure)

焊道序号 Pass No.	焊条(丝)规格 Electrode Size (mm)	焊接电流 Welding Current 安培 Amp(s)	焊接电流 Welding Current 伏特 Volts	焊接速度 Travel Speed (mm/min)	接头详图 Joint Detail
1~n	4.0	130~210	20~28	64.7~230.6	该 WPS 用于已批准的符合 AWS D1.5-2002 图 2.4 和图 2.5 的焊接坡口。This WPS is to be used for all preapproved WPSs weld joints as identified in accordance with Figures 2.4 and 2.5 of AWS D1.5M/D1.5----2002 Edition.

选定适用的电流、电压后在 WPS 焊接参数选用表中查到焊接速度范围。
Refer to WPS parameters table to determine operating parameter to stay within the heat input limit.

该工艺可以因制造工序、装配、焊道尺寸等而变化，但应在 AASHTO/AWS D1.5 第 5 章给出的变量限值之内。
(This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in section 5.)

修订号(Revision No.) 0
批准(Authorized by)
工艺评定记录编号(PQR No.) HP200778-1/HP200781-1
日期(Date) 2007.9.20
* 本 WPS 符合 AASHTO/AWS D1.5 2002，用于桥梁结构。
(This WPS is conformable with the current edition of AASHTO/AWS D1.5 2002, used for BRIDGE structure.)

注：该 WPS 仅适用于定位焊。Note: This WPS is used for the tack welds.

ZPMC	焊接参数选用表 B* SELECTED LIST OF WELDING PARAMETER	编号 No. WPS-B-T-33(1)14 (定位焊 tack weld)

PQR 编号：HP200778-1
PQR No.

对于免除评定Φ4.0 焊条 WPS
For WPS Prequalified For SMAW Φ4.0 Electrode

	电流 Amps	电压 Volts	焊接速度 Travel Speed (mm/min)	热输入 Heat Input (KJ/mm)
平均值 Average				
范围 Range				
最大值 Maximum	210.0	28.0		2.41
最小值 Minimum	130.0	20.0		1.53

WPS 焊接参数选用表
WPS Parameters Table

电压 Volts	电流 Amps									
	130.0		150.0		170.0		190.0		210.0	
20.0	64.7	102.0	74.7	117.6	84.6	133.3	94.6	149.0	104.6	164.7
22.0	71.2	112.2	82.2	129.4	93.1	146.7	104.1	163.9	115.0	181.2
22.7	73.4	115.6	84.6	133.3	95.9	151.1	107.2	168.9	118.5	186.7
26.0	84.1	132.5	97.1	152.9	110.0	173.3	123.0	193.7	135.9	214.1
28.0	90.6	142.7	104.6	164.7	118.5	186.7	132.4	208.6	146.4	230.6
	焊接速度 Travel Speed in mm/min									

选用示例：如选用 170A 和 22V，在表中纵横相交查到的焊接速度范围为 93.1~146.7mm/min.
X.:170A×22V×Travel speed Range 93.1~146.7mm/min.

☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED

Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION

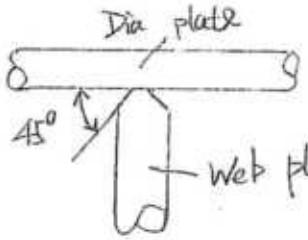
Signed _____ for Rick McRae
Structure Representative

Date 10-1-2007

批准(Authorized By)：

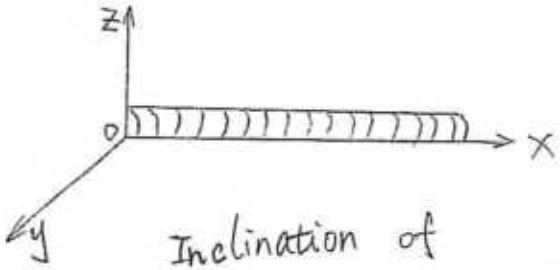
日期(Date)：2007-9-20

sketch :



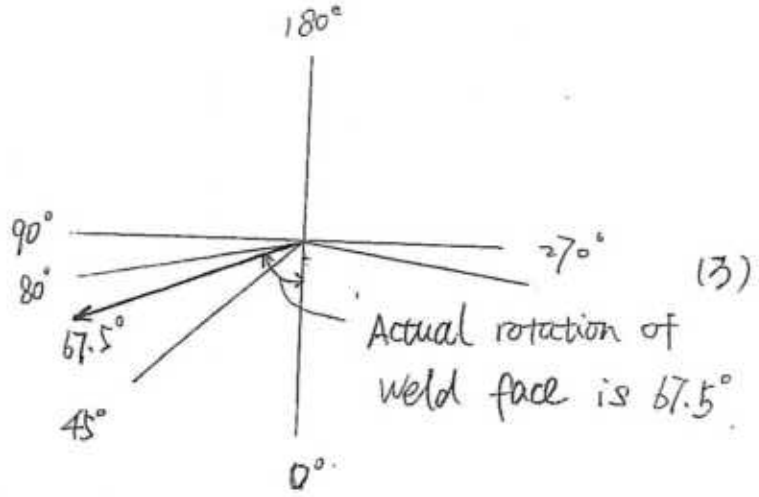
(1)

WT65 & WT66



(2)

Inclination of weld axis is 0°.



(3)

— overhead range

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000147

Subject: NCR No. ZPMC-0158

Dated: **01-Oct-2008**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000146 Rev: 02**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC takes exception with this NCR and the position of the weld.

Please find attached.

Submitted by:

Attachment(s): ABF-NPR-000146R02;

Caltrans' comments:

Status: CLO

Date: 10-Oct-2008

Per the attached email from Kim Mackey of ABF, ABF-NPR-000146R02 has been retracted. The response to ABF-ZPMC-000146R01 reads as follows and closes NCR No. ZPMC-0158.

"The Contractor's response is acceptable. After further discussion, the weld in question is in the 4G position, and the welder was qualified in that position. The Department concurs that Non-Conformance ZPMC-0158 is closed."

Submitted by: Prchlik, Aaron

Date: 10-Oct-2008

Attachment(s): Attached Email

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY Arnold Schwarzenegger, Governor
DEPARTMENT OF TRANSPORTATION
CHINA FABRICATION TEAM
506 Shangcheng Rd., Pudong New District
Shanghai 200120, PRC

REVIEW OF CONTRACTOR'S TRANSMITTAL

To: Dave Williams, American Bridge – Fluor, a Joint Venture
Gary Pursell, Resident Engineer

Review Date: 09/30/2008

From: Joshua Ishibashi, Structural Materials Representative

Contract No.: 04-0120F4

Date/Time Submittal Recieved: 09/16/2008

☒ **China Standard Time (GMT+08:00)**

Contractor's Transmittal #: AFC-CAL-TRN-001326 **Rev. #** 0

☒ substantially **complies** with contract requirements and is approved				
☐ substantially **complies** with contract requirements and is approved as noted.				
☐ Lacks sufficient information and/or contains unacceptable items that must be corrected or prior to resubmital				
Verbal Notification ☒ **No** ☐ **Yes** **Date:** **Time:**				
Name of individual from Contractor Notified:				
This submittal is a:	☐ **Welding Report**		☐ **Critical Weld Repair**	
	☐ **Request for Information**		☐ **Heat Straightening Request**	
	☐ **Fabrication Procedures**		☒ **Other:** NCR Closure	
Submitting Contractor: ZPMC				

ITEMS REVIEWED		**COMPLIES**		**COMMENTS**
1.	NCR ZPMC-0158	☒Yes	☐No	See Remarks
2.		☐Yes	☐No	
3.		☐Yes	☐No	
4.		☐Yes	☐No	
5.		☐Yes	☐No	

Remarks: METS recommends that AFC-CAL-TRN-001326 be approved and this NCR be closed.

JII

Reviewer: Joshua Ishibashi Date: 09/30/2008

☑ Construction Concurrence: Initials DLW Date 2008-09-30

Received by (ABFJV): Qi Date 9-30-08 Time 1005

American Bridge / FLUOR

A JOINT VENTURE

3740 Pudong Nanlu
Shanghai, China 200120

LETTER OF TRANSMITTAL

To: California Dept. of Transportation
666 Feng Bin Road, Rm 708
Changxing Island, Shanghai
Attention: Mr. Pete Siegenthuler
Project: S.F.O.B.B.
Job # 04-0120F4

Transmittal No: AFC-CAL-TRN-001326
Date: 9/16/2008

Enclosed:

Qty.	Item	Qty.	Item
	For Closure		
1	ZPMC Transmittal TL-001580		
	NCR ZPMC-0158		

APPROVED
APPROVED AS NOTED
RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Service
Office of Structure Construction
Structure Representative — Date
DCW for RM 2008-09-30

9/16/08

TL-001580

TRANSMITTAL LETTER

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 09/12/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: NCR-000175(ZPMC-0158)FOR CLOSURE

SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

(1) COPY OF LETTER OF RESPONSE WITH NO.T-017.
(2) COPY OF NCR WITH NUMBER NCR-000175(ZPMC-0158)
(3) COPY OF WPS-B-T-33(1)14.

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEGEMENT:

PLAN HOLDER

9/12/08 1435
DATE

ABFJV
COMPANY

PHONE NO.

PLAN NUMBER: N/A
#R787-QCP-102

APPROVED
☐ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Service
Office of Structure Construction
Structure Representative
DLW for RM 2008-09-30

No. T-017

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-9-12

REGARDING: NCR-000175 (ZPMC-0158)

ZPMC received Caltrans' NCR-000158, it mentioned ZPMC welded on the Tower component number NSD1-SA322B/B-3&4(Double diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC QC was informed of this discrepancy, the welder was allowed by Mr.Xu Jun to perform welding again in the same position and weld joint.

ZPMC took exception to this NCR. ZPMC arranged the 4G (4F) welder to perform the tack welding in the overhead position, which CT inspector Kenneth Riley regarded as the horizontal position. But ZPMC looked into the AWS chapter 5 figure 5.5, and joint WT 65 & WT 66. ZPMC is pretty sure the position the welder performed in is the overhead position. So ZPMC did not commit any mistake as to this NCR. Please see the attached sketch and WPS for your reference.

So ZPMC hoped Caltrans can check again and withdraw this NCR.

ATTACHMENT:

NCR-000175 (ZPMC-0158)
WPS-B-T-33(1)14

Xu Jun 2008.9.12

APPROVED
☐ APPROVED AS NOTED
☐ RETURNED FOR CORRECTION
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Division of Engineering Service
Office of Structure Construction

Structure Representative | Date

DCW for RM 2008-09-30

ABF QCM
16 SEPT. 08

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:**	22-Aug-2008
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanepicki	**Job Name:**	SAS Superstructure
Attention:	Mr. Dave Williams Consultant	**Document No:**	05.03.06-000147
Subject:	NCR No. ZPMC-0158		

Reference Description: Unqualified Welder / Double Diaphragm

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:** 01

Remarks:

ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance that documenting that the weld placed is in compliance with the contract requirements. In addition to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to indentify the lack of welder qualification for the weld position and once the lack of the qualification was indentified to allow the welder to continue. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer
Attachments: ZPMC-0158

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe
File: 05.03.06

02.02;15.04

Received
NCT-000147 22 Aug 08

STATE OF CALIFORNIA–BUSINESS,TRANSPORTACTION AND HOUSING AGENCY — Arnold Schwarzenegger, Governor

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-000175
Prime Contractor: American Bridge/Fluor Enterprises, a JV — **Date:** 18-Aug-2008
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island — **NCR #:** ZPMC-0158

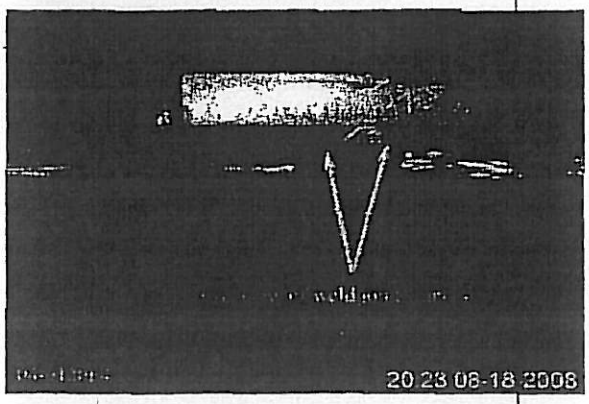
Type of problem:

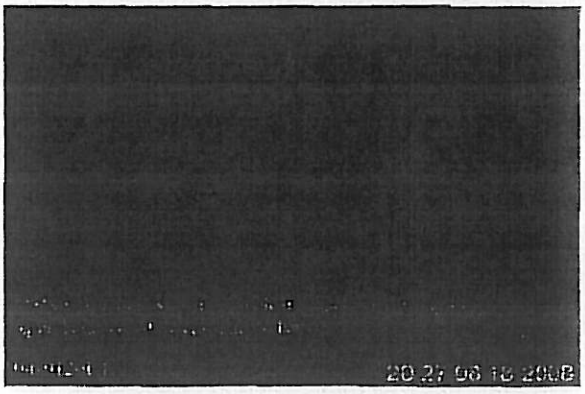
Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** Tower
Procedural	☑	**Procedural**	☐	**Descripton:**		NSD1-SA322-B/B-3 & 4

Reference Description: Unqualified Welder

Description of Non-Conformance:

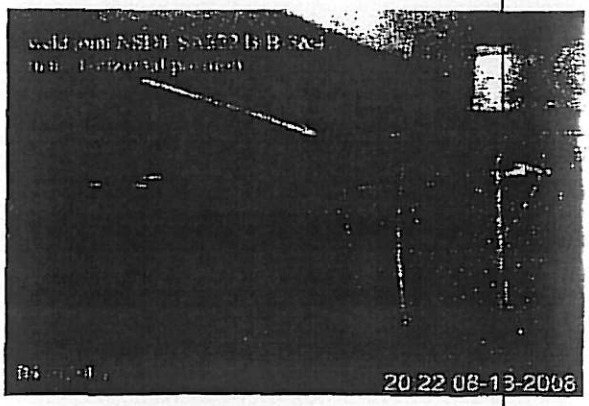
ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.





QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:
AWS D1.5-2002, Section 5.22.1, Table 5.6
Who discovered the problem: Quality Assurance (QA) Inspector, Kenneth Riley
Name of individual from Contractor notified: ABFJV Quality Control Inspector, Mike Williams
Time and method of notification: 18-AUG-08, Via phone @ approximately 2030hrs
Name of Caltrans Engineer notified: Scott Kennedy, Structure Representative
Time and method of notification: 21-AUG-08, at approximately 1330 hours
QC Inspector's Name: Xu Jun (Erick)
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 Ryan Smith, who represents the Office of Structural Materials for your project.

Inspected By:	Smith,Ryan	SMR
Reviewed By:	Smith,Ryan	SMR

ZPMC	焊接工艺规程 B* WELDING PROCEDURE SPECIFICATION	编号 No. WPS-B-T-33(1)14 (定位焊 tack weld) 有效期 Period of validity FCM：2007.5~2010.5 NON-FCM：2007.5~2012.5

母材技术条件（Material specification） A.709M HPS 485WT2/SHEAR LINK GRADE 485
焊接方法（Welding process） 药皮焊条手工电弧焊(SMAW)
手工或机械（Manual or machine or semi-auto） 手工(Manual)
焊接位置（Position of welding） 仰焊(4G,4F)
填充金属技术条件（Filler metal specification） AWS A5.5 填充金属级别（Filler metal classification） E9018M
填充金属牌号（Filler metal brand） Excalibur 9018M MR (Φ4.0)
焊剂（Flux） N/A
保护气体（Shielding gas） N/A 流率（Flow rate） N/A
单焊道或多焊道（Single or multiple pass） 多道(Multiple Pass)
单弧或多弧（Single or multiple arc） 单弧(Single arc)
焊接电流（Welding current） 直流(DC) 极性（Polarity） 反接(EP)
焊丝伸出长度（Electrode extension） N/A
焊接方向（Welding progression） N/A
根部处理（Root treatment） N/A
焊前最低预热温度和道间温度（Minimum preheat and interpass temperature before welding）
40℃ [T≤20mm] 100℃ [20mm<T≤40mm] 140℃ [40mm<T≤60mm] 180℃ [60mm<T]
最高预热和道间温度（Preheat and interpass temperature Max） 230℃
后热温度(Postheat temperature) N/A
热输入（线能量）(Heat input) 最小(Min) 1.53KJ/mm

☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED
Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION
Signed for Rick Morral
Structure Representative
Date 10-1-2007

焊 接 工 艺
(Welding procedure)

焊道序号 Pass No.	焊条(丝)规格 Electrode Size (mm)	焊接电流 Welding Current 安培 Amp(s)	伏特 Volts	焊接速度 Travel Speed (mm/min)	接头详图 Joint Detail
1~n	4.0	130~210	20~28	64.7~230.6	该 WPS 用于已批准的符合 AWS D1.5-2002 图 2.4 和图 2.5 的焊接坡口。This WPS is to be used for all preapproved WPSs weld joints as identified in accordance with Figures 2.4 and 2.5 of AWS D1.5M/D1.5----2002 Edition.

选定适用的电流、电压后在 WPS 焊接参数选用表中查到焊接速度范围。
Refer to WPS parameters table to determine operating parameter to stay within the heat input limit.

该工艺可以因制造工序、装配、焊道尺寸等而变化，但应在 AASHTO/AWS D1.5 第 5 章给出的变量限值之内。
(This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in section 5.)

修订号(Revision No.) 0 批准(Authorized by)
工艺评定记录编号(PQR No.) HP200778-1/HP200781-1 日期(Date) 2007.9.20

* 本 WPS 符合 AASHTO/AWS D1.5 2002，用于桥梁结构。
(This WPS is conformable with the current edition of AASHTO/AWS D1.5 2002, used for BRIDGE structure.)

注：该 WPS 仅适用于定位焊。Note: This WPS is used for the tack welds.

ZPMC	焊接参数选用表 B* SELECTED LIST OF WELDING PARAMETER	编号 No. WPS-B-T-33(1)14 (定位焊 tack weld)

PQR 编号：HP200778-1
PQR No.

对于免除评定Φ4.0 焊条 WPS
For WPS Prequalified For SMAW Φ4.0 Electrode

	电流 Amps	电压 Volts	焊接速度 Travel Speed (mm/min)	热输入 Heat Input (KJ/mm)						
平均值 Average										
范围 Range										
最大值 Maximum	210.0	28.0		2.41						
最小值 Minimum	130.0	20.0		1.53						

WPS 焊接参数选用表
WPS Parameters Table

电压 Volts	电流 Amps									
	130.0		150.0		170.0		190.0		210.0	
20.0	64.7	102.0	74.7	117.6	84.6	133.3	94.6	149.0	104.6	164.7
22.0	71.2	112.2	82.2	129.4	93.1	146.7	104.1	163.9	115.0	181.2
22.7	73.4	115.6	84.6	133.3	95.9	151.1	107.2	168.9	118.5	186.7
26.0	84.1	132.5	97.1	152.9	110.0	173.3	123.0	193.7	135.9	214.1
28.0	90.6	142.7	104.6	164.7	118.5	186.7	132.4	208.6	146.4	230.6
	焊接速度 Travel Speed in mm/min									

选用示例：如选用 170A 和 22V，在表中纵横相交查到的焊接速度范围为 93.1~146.7mm/min.
X.:170A×22V×Travel speed Range 93.1~146.7mm/min.

☑ APPROVED
☐ APPROVED AS NOTED
☐ NOT APPROVED

Pursuant to Section 5-1.02
of the Standard Specifications
State of California
DEPARTMENT OF TRANSPORTATION

Signed for Rick Morrow
Structure Representative

Date 10-1-2007

批准(Authorized By):

日期(Date): 2007.9.20

"Kim Mackey"
<kmackey@abfjv.com>
10/03/2008 11:54 AM

To "'Kim Mackey'" <kmackey@abfjv.com>, <lsoononn@abfjv.com>, <slawton@abfjv.com>, <apeterson@abfjv.com>, <ckanapicki@abfjv.com>, <awong@abfjv.com>
cc
bcc
Subject Retracting: ABF-CAL ABF-NPR-000146R2 - ZPMC 158

Sorry, I got in too much of a rhythm and sent this in accidentally. It is here by retracted as the Original and Rev. 1 are closed.

My apologies!

Kim Mackey

From: Kim Mackey [mailto:kmackey@abfjv.com]
Sent: Wednesday, October 01, 2008 12:57 PM
To: (lsoononn@abfjv.com); (slawton@abfjv.com); apeterson@abfjv.com; ckanapicki@abfjv.com; cknops@abfjv.com; Dan Raynor; Dave Williams; Dave Williams (dwilliams@abfjv.com); draynor@abfjv.com; dwalton@cn.abfjv.com; fzhang@abfjv.com; Gang jiao; gjiao@abfjv.com; grosamilia@abfjv.com; JBowers@abfjv.com; MFlowers@abfjv.com; Nate Lindell; nlindell@abfjv.com; Peter Ferguson; Ruby Li (rli@abfjv.com); Sbuschmeyer@abfjv.com; Thomas Nilsson; TNilsson@abfjv.com; wyang@cn.abfjv.com; (Ching_Chao@dot.ca.gov); (Douglas_Wright@dot.ca.gov); (mark_woods@dot.ca.gov); (Scott_Kennedy@dot.ca.gov); Aaron Prchlik (aaron_prchlik@dot.ca.gov); Ajay Sehgal (ajay_sehgal@dot.ca.gov); Bernard Feather (Bernard_R_Feather@dot.ca.gov); Bill Shedd (E-mail) (Bill_Shedd@dot.ca.gov); Bob Brignano (bob_brignano@dot.ca.gov); Chandrawinata Martin (Martin_Chandrawinata@dot.ca.gov); Charles Ho (Charles_Ho@dot.ca.gov); Ching Chao (cchao@sasoverseasteam.com); Gil Klebanov (Gilel_Klebanov@dot.ca.gov); Jun Xu (Jun_Xu@dot.ca.gov); Kannu Balan (kannu_balan@dot.ca.gov); Michelle Chui (michelle_chui@dot.ca.gov); Mike Travis (Mike.Travis@LANEngineering.com); Mohammad Awal (mohammad_awal@dot.ca.gov); Ron Matin (ron_matin@dot.ca.gov); Stanley Ku (E-mail) (Stanley_Ku@dot.ca.gov); Tai-Lin Liu (Tai-Lin_Liu@dot.ca.gov); Warren Collins
Subject: ABF-CAL ABF-NPR-000146R2 - ZPMC 158

Please find attached ABF-NPR-000146R2 - ZPMC 158

Kimberly Mackey

American Bridge/Fluor Joint Venture
375 Burma Road Oakland, CA 94607
Direct Line: 510-808-4636 Fax: 510-808-4601
Email: kmackey@abfjv.com

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 #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, PRC **Report No:** NCS-000089
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 24-Sep-2008
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0158

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☐	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☑	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 18-Aug-2008

Description of Non-Conformance:
ABF allowed ZPMC to weld on the Tower component number NSD1-SA322-B/B-3 & 4 (Double Diaphragm) in the horizontal position with a welder that was not qualified to weld in this position. After the ZPMC Quality Control Inspector was informed of this discrepancy, the welder (Bai Jinhu) was allowed by Mr. Xu Jun to perform welding again in the same position and weld joint. Only after readdressing the issue with the QC Inspector did he stop the welding.

Contractor's proposal to correct the problem:
Upon presentation of ABF/ZPMC's explanation that the welding was being performed in the overheard position the Department concurs that welding was being performed in the overhead (4G) position. Therefore the NCR will be closed with no further action required.

Corrective action taken:
N/A

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 Ryan Smith, (858) 232-6799, who represents the Office of Structural Materials for your project.

Inspected By:	Ishibashi,Josh	Quality Assurance Inspector
Reviewed By:	Smith,Ryan	QA Reviewer