

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-000241

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 23-Mar-2009

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

NCR #: ZPMC-0215

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: X8E Plate/Stiffener - Segment 4BE
Procedural	Procedural	Description:	

Reference Description: Unapproved/non-certified welder was performing base metal repairs

Description of Non-Conformance:

Quality Assurance (QA) Inspector observed a ZPMC personnel performing the base metal repairs on an X8E (stiffener plate) for Segment 4BE. The following issues were found by the QA Inspector:

-Unapproved and non-certified welder was performing the SMAW base metal repairs. The name of this person is Hu Zhan Ling (worker's ID# 208493).

-No welding repair was done without a welding repair report.

-Quality Control (QC) did not find that the person welding is a non-certified and unapproved welder.

Therefore, the welding of the X8E Plate/Stiffener was done not according to the project requirement.



Applicable reference:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

AWS D1.5 2002- paragraph 6.4.1: "The inspector shall allow welding to be performed only by the welders, welding operators, and tack welders who are qualified..."

AWS D1.5 2002- paragraph 5.24.2.2: "A change in the position of welding to one for which the welder is not already qualified shall require requalification."

Who discovered the problem: Mahlon Lindenmuth

Name of individual from Contractor notified: Ren Zhensheng

Time and method of notification: 1100 hrs - Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1130 hrs - Verbal

QC Inspector's Name: Shi Lei

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 Eric Tsang, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
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Reviewed By:	Wahbeh, Mazen	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 07-Apr-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 Manager - OBG

Document No: 05.03.06-000210

Subject: NCR No. ZPMC-0215

Reference Description: Unapproved/non-certified welder was performing base metal repairs

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:**

Remarks:

Quality Assurance (QA) Inspector observed a non-certified welder, Hu Zhan Ling, worker ID# 208493, performing the SMAW base metal repairs on an X8E (stiffener plate) for Segment 4BE without a welding repair report. Quality Control (QC) failed to identify non-certified welder performing weld repairs.

Action Required and/or Action Taken:

Base metal repairs performed by a non certified welder shall be removed. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0215

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, 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: 05.03.06-000210

Subject: NCR No. ZPMC-0215

Dated: 20-May-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000217 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has verified the welder was not approved for welding and will perform qualification testing of this welder.

ZPMC has verified the welder was not approved for welding and will perform qualification testing of this welder. A Welding repair report and welder qualification record will be provided at a later date.

Submitted by:

Attachment(s): ABF-NPR-000217R00

Caltrans' comments:

Status: AAP

Date: 03-Jun-2009

The response is acceptable, but the Non-Conformance is not closed.

Provide the welder qualification record documenting that the welder has completed the qualification testing. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0215 at that time.

The qualification record and the welding repair report must be submitted and approved before this weld can be accepted.

Submitted by: Wright, Doug

Date: 03-Jun-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000210

Subject: NCR No. ZPMC-0215

Dated: 27-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000217 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000217R01;

Caltrans' comments:

Status: REJ

Date: 20-Aug-2009

The proposed resolution is not acceptable. The attached welder qualification documentation is not complete.

Please submit the Welder Performance Qualification Test Report, RT report, and Bend Test report for welder ID# 208943 indicating the 1F position qualified.

The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0215 at that time.

Submitted by: Wright, Doug

Date: 20-Aug-2009

Attachment(s):



No. B-404

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-20

REGARDING: NCR-00246/241 (ZPMC-0220/215)

With this letter of response, ZPMC requests closure for Caltrans **NCR-00246/241 (ZPMC-0220/215)**. According to the NPR comments that "provide the welder qualification record documenting that the welder has completed the qualification testing", therefore we have made the qualification for that two welder, and notify the caltrans inspector to witness all of the process. And as the specification of the AWS ,we have make the RT inspection for the bevel joint test piece and break test for the tack weld piece. Basically as the acceptable report we consider that the welder have complete the test.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report **NCR-00246/241 (ZPMC-0220/215)**.

Please reference attached documentation for acceptance and closure the **NCR-00246/241 (ZPMC-0220/215)**.

ATTACHMENT:

NCR-00246/241 (ZPMC-0220/215)

The welder qualified detail pictures

The RT report for the bevel joint test piece

The break test report for the tack weld piece

Zhao Shuangbao

2009. 7. 20

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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-000246

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 29-Mar-2009

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

NCR #: ZPMC-0220

Type of problem:

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

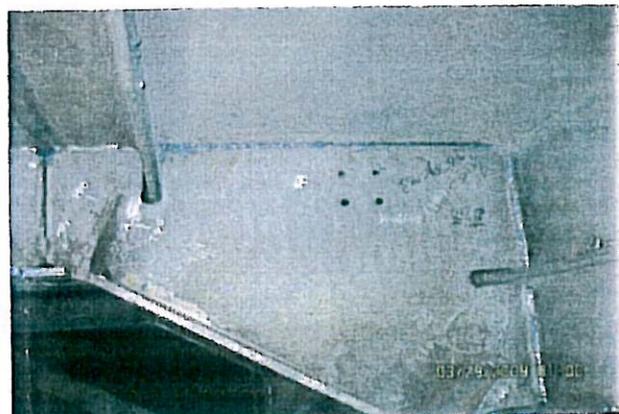
Bridge No: 34-0006

Component: OBG Crossbeam 4

Reference Description: Welder was welding in an unqualified position

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed welder Mao Shuai (217294) welding in the 4G position on weld joint CB201G-148/166 in OBG Assembly Bay 5. QA Inspector asked for welder's qualification card for verification. It was noted that the welder was not qualified to weld in the 4G position. Therefore, this welder was welding in an unqualified position.



Applicable reference:

AWS D1.5 (2002) - Sec. 5.24.2.2: "A change in the position of welding to one for which the welder is not already qualified shall require requalification."

Who discovered the problem: Joe Alaniz

Name of individual from Contractor notified: Kelvin Cheung

Time and method of notification: 1600 hours, Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1300 hours, Verbal

The welder qualification detail pictures

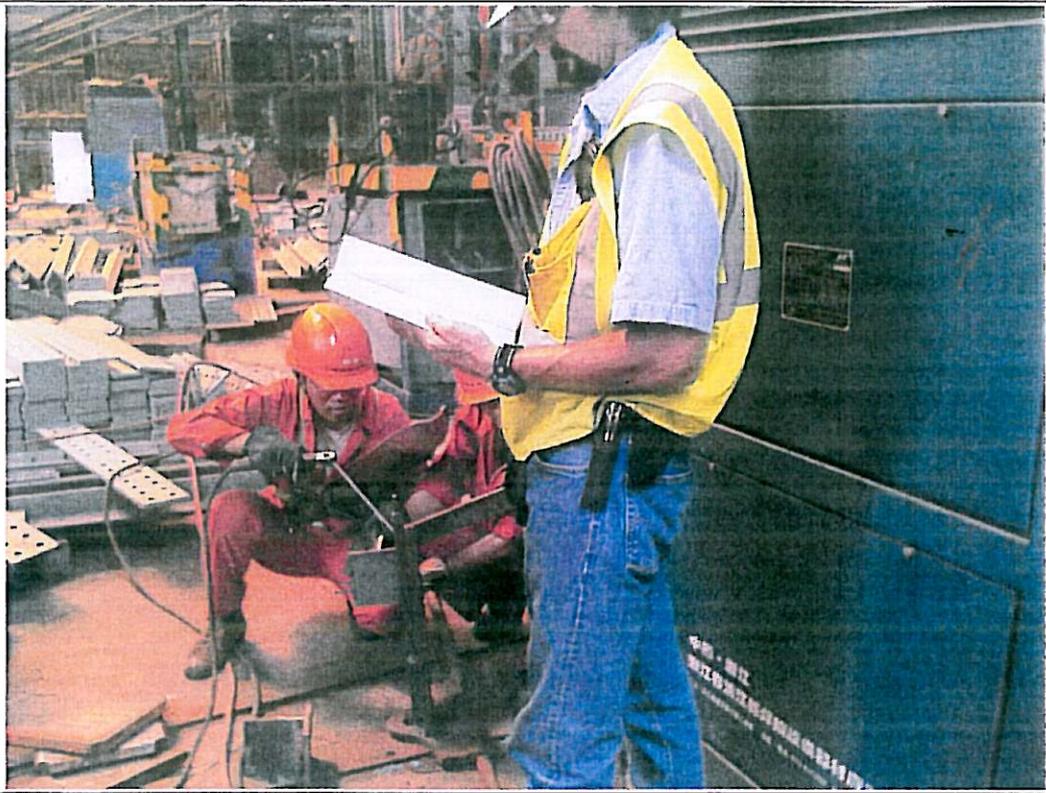
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Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000241

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 23-Mar-2009

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

NCR #: ZPMC-0215

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

Bridge No: 34-0006

Component: X8E Plate/Stiffener - Segment 4BE

Reference Description: Unapproved/non-certified welder was performing base metal repairs

Description of Non-Conformance:

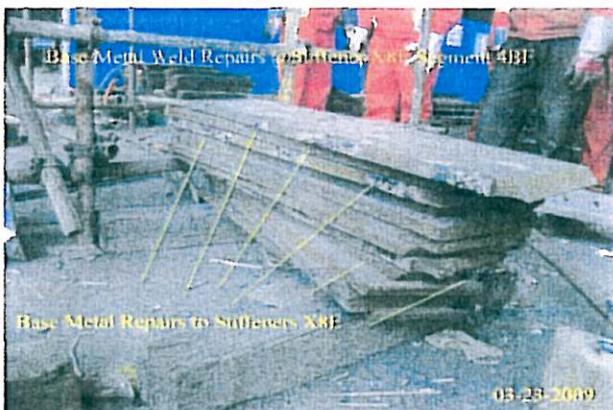
Quality Assurance (QA) Inspector observed a ZPMC personnel performing the base metal repairs on an X8E (stiffener plate) for Segment 4BE. The following issues were found by the QA Inspector:

-Unapproved and non-certified welder was performing the SMAW base metal repairs. The name of this person is **Hu Zhan Ling** (worker's ID# 208493).

-No welding repair was done without a welding repair report.

-Quality Control (QC) did not find that the person welding is a non-certified and unapproved welder.

Therefore, the welding of the X8E Plate/Stiffener was done not according to the project requirement.



Applicable reference:

2009年焊工考试试板点焊试验记录

Bending Retest Record of Welder Qualification

试验委托单号 Consigning list of testing: WT-LX-20090717-4		检测依据 Test Standard: AWS D1.5						
样品接收日期 Date of receiving the Spe.: July 17, 2009		送样人 Sender: 赵双宝						
试验设备名称 Testing equipment: WE-600								
试验设备编号 Equipment No.: ZTC-L-002								
试验员 Operator: 殷国华、邵飞飞		审核 Reviewed by: <i>[Signature]</i> 见证 Witnessed by: <i>[Signature]</i> 31769						
环境温度 Surround temp.: 26°C								
样品号 Specimen No.	试板编号 No.	焊接位置 Welding Position	焊接方法 Welding Process	焊工姓名	弯曲类型 Type of Bend	弯曲条件 Bending Condition	试验结果 Test Result	试验日期 Test Date.
208493	-	-	1F	Hu Zhan Ling	-	-	OK	July 17, 2009
209664	-	-	3F	Zhang Cheng	-	-	OK	July 17, 2009

接收人 殷国华 (集团)
股份有限公司
检测中心
报告专用章 (力学)

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000210

Subject: NCR No. ZPMC-0215

Dated: 27-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000217 **Rev:** 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has attached the additional documents as requested for closure of this NCR.
ZPMC has attached the additional documents as requested for closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000217R02;

Caltrans' comments:

Status: CLO

Date: 10-Sep-2009

The proposed resolution is acceptable. All of the required documents have been provided showing that the welder is qualified. The Department concurs that Non-Conformance ZPMC-0215 is closed.

Submitted by: Wright, Doug

Date: 10-Sep-2009

Attachment(s): NPR CT Comments



No. B-464

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-8-26

REGARDING: NCR-000246/241 (ZPMC-220/215)

With this letter of response, ZPMC requests closure for Caltrans NCR-000246/241 (ZPMC-220/215). Per the comments of the NCR proposed resolution we submit the welder performance qualification test reports for the two welders, and apply to close out the NCR in current.

so base on the above explanation, ZPMC applies to close the caltrans's report NCR-000246/241 (ZPMC-220/215).

Please reference attached document for acceptance and closure the NCR-000246/241(ZPMC-220/215).

ATTACHMENT:

NCR-000246/241 (ZPMC-220/215)

The welder performance qualification test reports

Zhao Shuang Bao

2009. 8. 26



SHANGHAI ZHENHUA HEAVY INDUSTRY CO., LTD

WELDER PERFORMANCE QUALIFICATION TEST REPORT

Welder's Name: Hu Zhan ling	WPS No.: WPS-B-P-2111	Test Date: 14 July 2009
I.D. No.: 208493	Application No.: NA	Test/Stamp No.: 208493
VARIABLE	ACTUAL QUAL VALUE	QUALIFICATION RANGE
Process	SMAW	SMAW
Process Type	Manual	Manual
Backing	NA	NA
Base Metal Spec/P or M-Number	ASTM A709 Grade 345	ASTM A709 Grades 250 & 345
Thickness - Groove	NA	NA
Thickness - Fillet	12mm	3mm ~ Unlimited
Diameter - Groove	N/A	N/A
Diameter - Fillet	N/A	N/A
Filler Metal		
Specification No.	AWS A5.1	N/A
Classification No.	E7018	N/A
F No.	NA	NA
Trade Name	TL-508	N/A
Diameter	4.0mm	N/A
Flux	NA	N/A
Deposited Weld Metal Thickness	N/A	N/A
Position	1F	1F
Vertical Progression	N/A	N/A
Shielding Gas	NA	NA
Root Shielding Gas	N/A	N/A
Current/Polarity	DCEP	DCEP
Transfer Mode	NA	N/A
Welding Witnessed by: Li Yanhua	CWI No.: 07120701	
Name of the Welding Test Center: Shanghai Zhenhua Heavy Industry Co., Ltd.		

TEST RESULTS

Type and Figure No.	Results	Type and Figure No.	Results
Split test	OK	Charpy V-Notch Impact	N/A
All Weld Metal Tension	N/A	Side Bend	N/A

Mechanical Test Conducted by (Name of the Testing Lab): Shanghai Zhenhua Port Machinery Co., Ltd.

NONDESTRUCTIVE EXAMINATION RESULTS

Visual Inspection Results: Acceptable	Visual Inspected by: Li Yanhua	Date: 2009-07-14
Ultrasonic Inspection Results: Acceptable	UT Report No.: NA	Date: NA
Macro Examination Results: Acceptable	ME Report No.: N/A	Date: NA

Radiographic Testing Conducted by (Name of the test lab): Shanghai Zhenhua Heavy Industry Co., Ltd.

We certify that the statements in this record are correct and the test weld was welded in compliance with the AWS D1.5M/D1.5:2002 Bridge Welding Code.

Date Qualified: 17 July 2009 By:
Date: 17 July 2009

2009年焊工考试试板点焊试验记录

Bending Retest Record of Welder Qualification

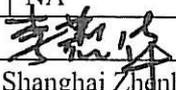
试验委托单号 Consigning list of testing: WT-LX-20090717-4		检测依据 Test Standard: AWS D1.5	
样品接收日期 Date of receiving the Spe.: July 17, 2009		送样人 Sender: 赵双宝	
试验设备名称 Testing equipment: WE-600		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> 接收人 邵飞飞 (集团) 上海振华重工 (集团) 股份有限公司 检测中心 报告专用章 (力学) </div>	
试验设备编号 Equipment No.: ZTC-L-002		试验员 Operator: 殷国华、邵飞飞	
审核 Reviewed by: <i>[Signature]</i>		见证 Witnessed by: <i>[Signature]</i>	
环境温度 Surround temp.: 26°C			

样品号 Specimen No.	试板编号 No.	焊接位置 Welding Position	焊接方法 Welding Process	焊工姓名	弯曲类型 Type of Bend	弯曲条件 Bending Condition	试验结果 Test Result	试验日期 Test Date.
208493	-	-	1F	Hu Zhan Ling	-	-	OK	July 17, 2009
209664	-	-	3F	Zhang Cheng	-	-	OK	July 17, 2009



SHANGHAI ZHENHUA HEAVY INDUSTRY CO., LTD

WELDER PERFORMANCE QUALIFICATION TEST REPORT

Welder's Name: Mao Shuai	WPS No.: WPS-B-T-2234-B-U2a-F	Test Date: 14 July 2009
I.D. No.: 217294	Application No.: NA	Test/Stamp No.: 217294
VARIABLE	ACTUAL QUAL VALUE	QUALIFICATION RANGE
Process	FCAW	FCAW
Process Type	Manual	Manual
Backing	Steel backing	Steel backing
Base Metal Spec/P or M-Number	ASTM A709 Grade 345	ASTM A709 Grades 250 & 345
Thickness – Groove	25mm	3mm ~ Unlimited
Thickness – Fillet	NA	NA
Diameter - Groove	NA	NA
Diameter - Fillet	N/A	N/A
Filler Metal		
Specification No.	AWS A5.20	N/A
Classification No.	E71T-1	N/A
F No.	NA	NA
Trade Name	Supercored 71H	N/A
Diameter	Φ1.4mm	N/A
Flux	NA	N/A
Deposited Weld Metal Thickness	N/A	N/A
Position	4G	1G,2G,4G
Vertical Progression	N/A	N/A
Shielding Gas	100%CO2	N/A
Root Shielding Gas	N/A	N/A
Current/Polarity	DCEP	DCEP
Transfer Mode	NA	N/A
Welding Witnessed by: Li Yanhua 	CWI No.: 07120701	
Name of the Welding Test Center: Shanghai Zhenhua Heavy Industry Co., Ltd.		

TEST RESULTS

Type and Figure No.	Results	Type and Figure No.	Results
Split test	N/A	Charpy V-Notch Impact	N/A
All Weld Metal Tension	N/A	Side Bend	N/A

Mechanical Test Conducted by (Name of the Testing Lab): Shanghai Zhenhua Heavy Industry Co., Ltd.

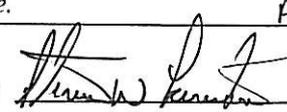
NONDESTRUCTIVE EXAMINATION RESULTS

Visual Inspection Results: Acceptable	Visual Inspected by: Li Yanhua	Date: 2009-07-14
Radiographic Inspection Results: Acceptable	RT Report No.: HK-LB-001	Date: 2009-07-17
Macro Examination Results: N/A	ME Report No.: N/A	Date: NA

Radiographic Testing Conducted by (Name of the test lab): Shanghai Zhenhua Heavy Industry Co., Ltd.

We certify that the statements in this record are correct and the test weld was welded in compliance with the AWS D1.5M/D1.5:2002 Bridge Welding Code.

ABF QCM

Date Qualified: 17 July 2009	By: 	Date: 17 July 2009
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DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-000292**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 26-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0215**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: 23-Mar-2009**Description of Non-Conformance:**

Quality Assurance (QA) Inspector observed a ZPMC personnel performing the base metal repairs on an X8E (stiffener plate) for Segment 4BE. The following issues were found by the QA Inspector:

-Unapproved and non-certified welder was performing the SMAW base metal repairs. The name of this person is Hu Zhan Ling (worker's ID# 208493).

-No welding repair was done without a welding repair report.

-Quality Control (QC) did not find that the person welding is a non-certified and unapproved welder.

Therefore, the welding of the X8E Plate/Stiffener was done not according to the project requirement.

Contractor's proposal to correct the problem:

Contractor has acknowledged that the issue must be addressed, and it has been added to the Master Punchlist.

Corrective action taken:

Completion of work being tracked by Master Punchlist. Submission of required documentation being tracked by Documentation Punchlist.

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

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer