

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



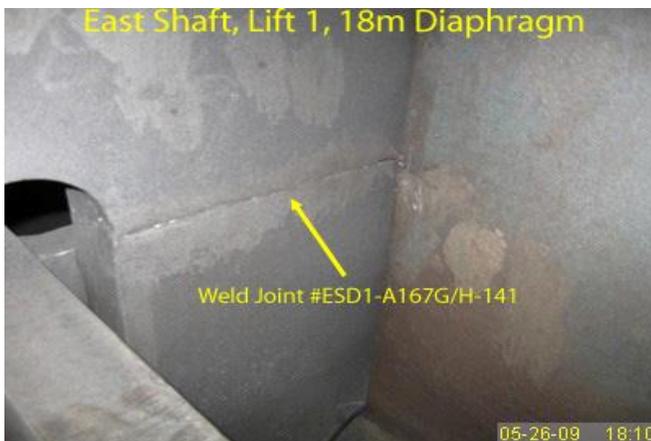
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000278**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 26-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0252**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: East Tower, Lift 1
Procedural	Procedural	Description: East Tower, Lift 1, 18m Diaphragm	

Reference Description: Missing backing bar at East Tower, Lift 1, 18m Diaphragm CJP weld**Description of Non-Conformance:**

During random after-blast visual verification of East Tower, Lift 1, QA observed that there was no backing bar at 18m diaphragm weld joint ESD1-A167G/H-141.

**Applicable reference:**

Approved Weld Joint Detail No. WT-63 requires a backing bar.

Who discovered the problem: Amit Juvekar**Name of individual from Contractor notified:** Don Walton**Time and method of notification:** 5/26/2009, 18:00; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 5/27/2009, 13:00; Verbal**QC Inspector's Name:****Was QC Inspector aware of the problem:**

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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: 28-May-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: 05.03.06-000249

Subject: NCR No. ZPMC-0252

Reference Description: Backing Bar / East Shaft Lift 1 / 18m Diaphragm CJP Weld

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:

During random after-blast visual verification of East Tower, Lift 1, QA observed that there was no backing bar at 18m diaphragm weld joint ESD1-A167G/H-141.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the deficiency has been brought into compliance with the contract requirements.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the Quality Control issue with regard to the missing backing bar. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0252

cc: Rick Morrow, Gary Pursell, Mark Woods, Jason Tom

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000249

Subject: NCR No. ZPMC-0252

Dated: 22-Jun-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000242 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: The backing bar was removed to repair an indication found by UT from the opposite side. It was not feasible to repair from the other side, also the backing bar is not required for structural purposes

ZPMC has informed ABF that the backing bar was removed to repair an indication found by UT from the opposite side. It was not feasible to repair from the other side as the indication lay near the backing bar surface. Also, the backing bar is not required for structural purposes and is typically used to achieve a CJP weld when there is limited access from both sides of the joint. See attached evidence of ZPMC inspection. ZPMC requests this NCR be closed.

Submitted by:

Attachment(s): ABF-NPR-000242R00;

Caltrans' comments:

Status: REJ

Date: 30-Jun-2009

The proposed resolution is not acceptable. The attachment includes only a picture of the completed weld, and does not include any inspection documents showing that the weld is acceptable.

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0252 at that time.

Submitted by: Wright, Doug

Date: 30-Jun-2009

Attachment(s):

18 mTpa

2pmc VT Acc. 09.06.15

2pmc UT: Acc. Weichao 09.6.16

2pmc MT: Acc. Cai Xinxin 09.06.16

11-ES

A/E

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000249

Subject: NCR No. ZPMC-0252

Dated: 30-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000242 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: Attached is documentation of the repair of the missed indications and subsequent NDT. The NDT documentation shows that the weld is acceptable.

Attached is documentation of the repair of the missed indications and subsequent NDT. The NDT documentation shows that the weld is acceptable. ZPMC QA has discussed this issue with their inspectors and the QC inspectors understand that the importance of identifying cases where backing bars are removed and notifying the appropriate departments to address the issues. Based on these actions and the attached documentation, ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000242R01;

Caltrans' comments:

Status: CLO

Date: 03-Dec-2009

The proposed resolution is acceptable. The non-conformance NCR ZPMC-0252 is closed.

Submitted by: Lee, Ken

Date: 03-Dec-2009

Attachment(s):



No. T-092

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-11-25

REGARDING: NCR-000278 (ZPMC-0252)

ZPMC received NCR-000278 (ZPMC-0252), it mentioned that East tower lift 1 visual indications between 43m to 47.6m diaphragms after shot blast.

About ESD1-A167G/H-141, ZPMC ground the weld back and repaired after VT. The MT, UT were performed to make sure no problem about this weld.

CT people did the verification after received ZPMC's notification. So ZPMC hope Caltrans could take a review and consider close the NCR.

ATTACHMENT:

NCR-000278 (ZPMC-0252)

T787-MT-7054

T787-UT-2468

2 CT Verification Pictures

A handwritten signature in black ink, appearing to be 'W. J. ...', is written over the attachment list.

2009-11-25



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 **Date:** 28-May-2009
 375 BURMA ROAD
 OAKLAND CA 95607 **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:** 05.03.06-000249
Subject: NCR No. ZPMC-0252

Reference Description: Backing Bar / East Shaft Lift 1 / 18m Diaphragm CJP Weld

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Material Location: Tower **Lift:** 01

Remarks:

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Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the deficiency has been brought into compliance with the contract requirements.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the Quality Control issue with regard to the missing backing bar. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0252

cc: Rick Morrow, Gary Pursell, Mark Woods, Jason Tom

File: 05.03.06

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DIVISION OF ENGINEERING SERVICES
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Bay Area Branch
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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, PRC

Report No: NCR-000278

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 26-May-2009

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

NCR #: ZPMC-0252

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: East Tower, Lift 1
 Procedural Procedural Description: East Tower, Lift 1, 18m Diaphragm

Reference Description: Missing backing bar at East Tower, Lift 1, 18m Diaphragm CJP weld

Description of Non-Conformance:

During random after-blast visual verification of East Tower, Lift 1, QA observed that there was no backing bar at 18m diaphragm weld joint ESD1-A167G/H-141.



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Who discovered the problem: Amit Juvekar

Name of individual from Contractor notified: Don Walton

Time and method of notification: 5/26/2009, 18:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 5/27/2009, 13:00; Verbal

QC Inspector's Name:

Was QC Inspector aware of the problem:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
Reviewed By:	Wahbeh,Mazen	SMR



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-7054 DATE日期 2009.06.14 PAGE OF 页码 1/1 Revision No: 0

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

DRAWING NO. 图号: ESD1-A167G/H CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4
FIRST LIFTING TOWER(E) AE CORNER

REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 ST , 2009
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EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5620 5395 5617
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MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
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PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
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MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-HPS-485WT2-Z 75mm
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WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	BUTT
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WELD I.D. 焊缝编号	DISCONTINUITY 不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
ESD1-A167G/H-141				ACC.		AFTER REPAIRED

BLANK

EXAMINED BY 主探 Cai Xinxin <i>Cai Xinxin of ob. 14.</i> LEVEL - II SIGN 签名 / DATE 日期	REVIEWED BY 审核 <i>Fu zhi'qiang of ob. 14.</i> LEVEL-II SIGN / DATE 日期
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质量经理 / QCM <i>Lu Yanhua 2009.6.15</i> 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE
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REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-2468 DATE 2009.06.14 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: FIRST LIFTING TOWER(E) CORNER AE DRAWING NO.: ESD1-A167G/H 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, 2009

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-HPS485WT2-Z 75mm

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	45°	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
ESD1-A167G/H-141		70				32									ACC.	100%
		60				34									ACC.	100%
BLANK																

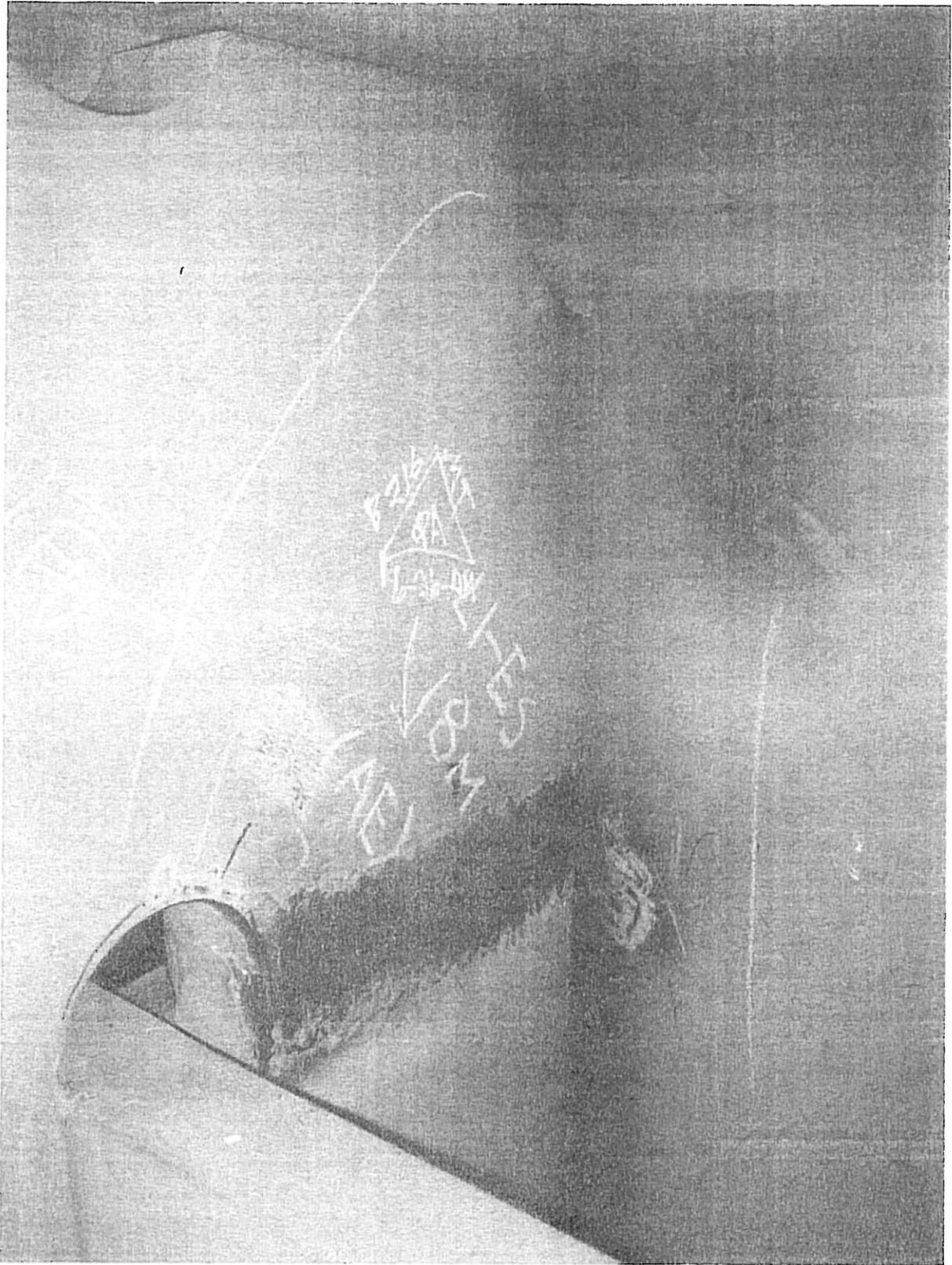
EXAMINED BY 主探 <i>Dar gov shery . 09.06.10.</i> LEVEL - II SIGN / DATE	REVIEWED BY 审核 <i>Li Liming . 09.06.10.</i> LEVEL - II SIGN / DATE
质量经理 / QCM <i>Lu Jianhua 09.6.15</i> 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE

191-111921

191-111921

191-111921

191-111921



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, PRC**Report No:** NCS-000284**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0252**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: 26-May-2009**Description of Non-Conformance:**

During random after-blast visual verification of East Tower, Lift 1, QA observed that there was no backing bar at 18m diaphragm weld joint ESD1-A167G/H-141.

Contractor's proposal to correct the problem:

Backgouge and reweld affected weld.

Corrective action taken:

The weld has been backgouged and rewelded. NDT results indicating a sound weld have been submitted and the weld has been verified by QA.

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod, Serge **Quality Assurance Inspector****Reviewed By:** Wahbeh, Mazen **QA Reviewer**