

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



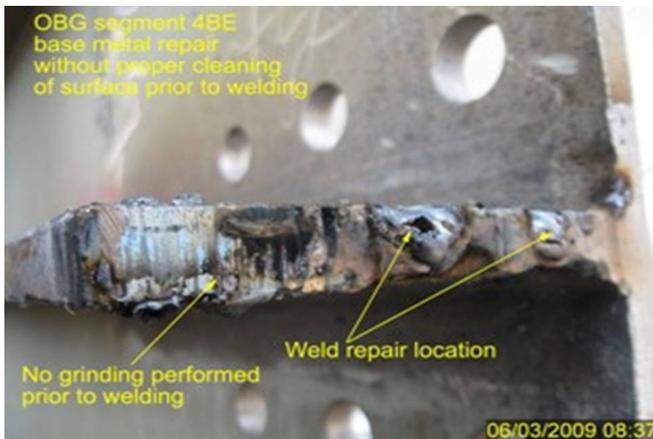
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000295**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0269**Type of problem:**

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

Reference Description: Improper Weld Joint Cleaning, Segment 4BE**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector observed the Contractor perform base metal edge weld repair without cleaning and removing slag prior to welding. The part was identified as X82V and located on Floor Beam FB018A (FL3, PP026, OBG Segment 4BE).

**Applicable reference:**

AWS D1.5 2002 section 3.7.1... "The surface shall be thoroughly cleaned before welding."

Who discovered the problem: Steve Hall**Name of individual from Contractor notified:** Li Jing Bo**Time and method of notification:** 0900 hours, 06-03-09, Verbal**Name of Caltrans Engineer notified:** Stanley Ku**Time and method of notification:** 1830 hours, 06-04-09, Email**QC Inspector's Name:** Zhang Hai Jun

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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 Skyler Guest, 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest,Skyler	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: 08-Jun-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: 05.03.06-000257

Subject: NCR No. ZPMC-0269

Reference Description: Improper Weld Joint Cleaning, Segment 4BE

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:

Caltrans Quality Assurance (QA) Inspector observed the Contractor perform base metal edge weld repair without cleaning and removing slag prior to welding. The part was identified as X82V and located on Floor Beam FB018A (FL3, PP026, OBG Segment 4BE).

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0269

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Doug Wright, 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: 05.03.06-000257

Subject: NCR No. ZPMC-0269

Dated: 27-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000267 Rev: 00

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-000267R00;

Caltrans' comments:

Status: CLO

Date: 18-Aug-2009

The proposed resolution is acceptable. A Critical Weld Repair (CWR) report for the repair is included, and the welder received additional training. Also, the weld in question has been accepted by MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0269 is closed.

Submitted by: Wright, Doug

Date: 18-Aug-2009

Attachment(s):



No. B-413

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-22

REGARDING: NCR-000295 (ZPMC-0269)

With this letter of response, ZPMC requests closure for Caltrans NCR-000295 (ZPMC-0269). We agree what describe in the non-conformance report, and have trained the worker staff for the weld internal surface condition prior the next pass, and all of the defects which can be found by visual must make cleaning and removing exactly.

We have also prepared the CWR for the engineer approval before the base metal beveling repair, and through the final VT/MT inspection we can assure the repair areas were all acceptable.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report NCR-000295 (ZPMC-0269)

Please reference attached documentation for acceptance and closure the NCR-000295 (ZPMC-0269).

ATTACHMENT:

NCR-000295 (ZPMC-0269)

ZPMC internal NCR

The closed critical welding repair report

The final MT report

Zhao Shuangbao

2009. 7.22



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-183
 (NCR-000295)

Item: Improper Weld joint Cleaning,
 Segment 4BE

Item Number:

Drawing:

名称描述:

件号: N/A

图号: 4BE

Location: Trial assembly

位置: 外场

Date:

日期: 2009-06-11

Description of Nonconformance:

不符合项状态描述:

Caltrans Quality Assurance inspector observed the contractor perform base metal edge weld repair without cleaning and removing slag prior to welding, The part was identified as X82V and located on Floor Beam FB018A(FL3,PP026,OBG Segment 4BE).

加州检验员发现在进行母材返修时, 在焊前并未对焊接区域清理和去除夹渣。这事发生在对 4BE 上的 FL3 (FB018A PP26) 上的筋板 X82V 进行母材补焊。

Work By: A. 6.12
 施工方: Jia Guo Lin

Prepared by: [Signature]
 准备: [Signature]

Reviewed by QCE:

质量工程师批准: Zhao Shuangbao
 6.11

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
 处理措施: 回用

Repair
 返修

Reject
 拒收

Recommendation:

建议: 培训和教育工人, 在焊接前, 必须清除夹渣, 污质等。
 Train and educate worker, and remove slag, dirty before welding.

Prepared by: Du Waling
 准备

Approved by QCA: _____
 质量经理批准

Reason for Nonconformance:

不符合原因: 由于在 FL3 上的筋板 X82V 进行母材补焊, 未对该区域清理和去除夹渣。
 perform base metal edge weld repair without cleaning and removing slag prior to welding.

预防措施: Enhance supervision and inspection on-site, and educate worker.
 加强现场监督和检查, 并对其工人教育。

Approved by/批准: Gao Jun 09.06.12

Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据: 提供 NDT 检测报告, 确认内部是否有缺陷

Afford NDT report to: _____ affirm whether the defects existed on welds.
 附件 无附件

Reviewed /批准: [Signature] 6.12/07

Verification: Acceptable
 确认: 可接受

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
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Shanghai 201913 PR China
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NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 08-Jun-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: 05.03.06-000257

Subject: NCR No. ZPMC-0269

Reference Description: Improper Weld Joint Cleaning, Segment 4BE

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- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG

Lift:

Remarks:

Caltrans Quality Assurance (QA) Inspector observed the Contractor perform base metal edge weld repair without cleaning and removing slag prior to welding. The part was identified as X82V and located on Floor Beam FB018A (FL3, PP026, OBG Segment 4BE).

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0269

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Doug Wright, Ching Chao

File: 05.03.06

DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Vallejo, CA 94592-1133
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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-000295

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 03-Jun-2009

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

NCR #: ZPMC-0269

Type of problem:

Welding Concrete Other Welding Curing Procedural

Bridge No: 34-0006

Joint fit-up Coating Other

Component: OBG Segment 4BE

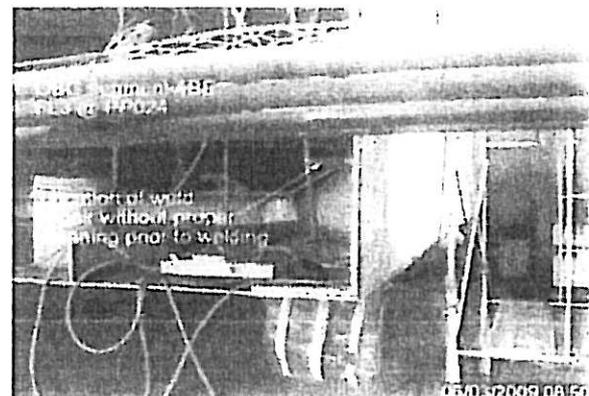
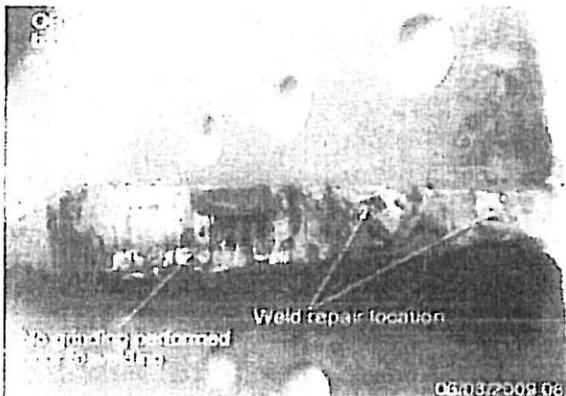
Procedural Procedural Description:

Reference Description: Improper Weld Joint Cleaning, Segment 4BE

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed the Contractor perform base metal edge weld repair without cleaning and removing slag prior to welding. The part was identified as X82V and located on Floor Beam FB018A (FL3, PP026, OBG Segment 4BE).

加筋梁加筋



Applicable reference:

AWS D1.5 2002 section 3.7.1... "The surface shall be thoroughly cleaned before welding."

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Li Jing Bo

Time and method of notification: 0900 hours, 06-03-09, Verbal

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 1830 hours, 06-04-09, Email

QC Inspector's Name: Zhang Hai Jun

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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 Skyler Guest, 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By: Guest, Skyler

SMR

Reviewed By: Wahbeh, Mazen

SMR



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	X82V	报告编号 Report No.:	B-CWR568
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	FL3上筋板件X82V FL3 stiffener X82V	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

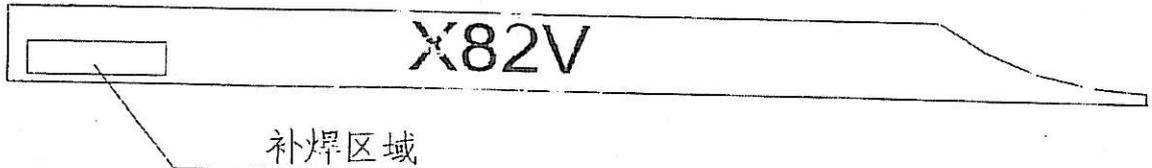
4BE段, FL3 (FB18A) 上筋板件X82V端头母材凹坑补焊前, 施工队未清理焊接区域。具体如下图
4BE segment, work team didn't clean welding area before building up FL3(FB18A) stiffener X82V, the detail see the following draft.

检验员 (Inspector): Wang Weiming

日期 (Date): 2009-06-17

焊缝返修位置示意图:

Draft of Welding Discontinuity:



Build up area

This document is APPROVED,
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial: SW Date: 6/23/9

产生原因:

Cause:

施工队在堆焊前，打磨不到位，导致焊接区域没有清理干净。

Work team didn't grind adequately before welding, which caused it didn't clean weld area completely.

车间负责人 (Foreman): Li Zhigang

日期 (Date): 09.06.18

处理意见

Disposition:

1. 准备一个正确的接头型式，具体参照相应的返修WPS;
2. 将碳刨区域打磨光滑，开始和结束的接头交错布置;
3. 对修补区域进行VT与MT检测;
4. 根据批准的返修焊接工艺规程 (WPS) 进行预热及焊接;
5. 将修补区域打磨与母材或相邻焊缝平齐;
6. 对修补区域作100%VT与MT检测;

1. Prepare excavation according to the approved repair WPS.
2. Grind the gouged area to a smooth and shiny finish, with tapered ends, to ensure staggered starts and stops.
3. VT and MT the repair area. *after grinding before the weld repair*
4. Preheat and weld according to the relevant repair WPS.
5. Grind the repaired area flush with base metal or the adjacent weld.
6. Perform VT and MT over 100% of the repair area.

QC CWI shall be present to witness the repair - Eric Tang

2009.6.23.

<input type="checkbox"/> APPROVED
<input checked="" type="checkbox"/> APPROVED AS NOTED
<input type="checkbox"/> 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
<i>QC for RM</i>
Structure Representative
Date: 6/23/09

工艺:

Technical Engineer: *Nin Hefang* Approved By:

审核:

Li Jianhua
for chenbin

日期:

Date:

09.06.19

		<h2 style="margin: 0;">关键焊缝返修报告</h2> <h3 style="margin: 0;">Critical Welding Repair Report (CWR)</h3>			版本 Rev. No.: 0
		项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	X82V
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	FL3上筋板件X82V	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787		FL3 stiffener X82V	NDT 报告编号 NDT Report No.:	
纠正措施: Corrective Action to Prevent Re-occurrence: 培训和教育打磨工, 焊接前必须将焊道清理干净, 经QC确认后在进行焊接。 Train and educate grinder, it shall clean weld pass before welding and check by QC before welding.					
车间负责人 (Foreman): <i>Li Zhigang</i> 日期 (Date): <i>09.06.18</i>					
参照的 WPS 编号 Repair WPS No.:	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1	工艺员 Technologist:		<i>Nia Tiefen</i> <i>09.06.19</i>	
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	<i>87°C</i>	返修的缺陷 Description of Discontinuity:		<i>N/A</i>	
焊前处理检查 Inspection Before Welding:	<i>Acc</i>	焊前预热温度 Preheat Temperature Before Welding:		<i>134°C</i>	
最大碳刨深度 Max. Depth of Gouge:	<i>N/A</i>	碳刨总长 Total Length of Gouge:		<i>N/A</i>	
焊工 Welder:	<i>044779</i>	焊接类型 Welding Type:	<i>SMAW</i>	焊接位置 Position:	<i>1G</i>
焊接电流 Current:	<i>158</i>	焊接电压 Voltage:	<i>23</i>	焊接速度 Speed:	<i>110</i>
返修后检查 Inspection After Repair:					
外观检查 VT Result:	<i>Acc</i>	检验员 Inspector:	<i>Zi Kanhua</i> <i>07120701</i>	日期 Date:	<i>2009. 6. 26</i>
NDT 复检 NDT Result:	<i>Acc</i>	探伤员 NDT Person:	<i>Li zhenhua</i>	日期 Date:	<i>09. 7. 17</i>
见证: Witness/Review:					
备注: Remark:					

#R787-QCP-900

This document is APPROVED
 State of California
 DEPARTMENT OF TRANSPORTATION
 Pursuant to Section 5-1.02 of the
 Standard Specifications
 Initial *CH* Date: *6/23/19*



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12377		DATE日期 2009.07.17		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: 4BE OBG FLOOR BEAM			CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4			
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			
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620			
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法		CURRENT 电流	AC		
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉		YOKE SPACING 磁轭间距	70~150mm		
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-345F2 14/30 mm		
WELDING PROCESS 焊接方法	NA		TYPE OF JOINT 焊缝类型	NA		
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			
X82V				ACC.		BASE MATERIAL
AFTER B-CWR568						
BLANK						
EXAMINED BY主探 Li zhen hua <i>Li zhen hua</i>			REVIEWED BY 审核 <i>Wang wei</i>			
LEVEL - II SIGN 签名 / DATE日期 <i>07.1</i>			LEVEL-II SIGN / DATE日期 <i>07.1</i>			
质量经理 / QCM			用户CUSTOMER			
签字 SIGN / 日期 DATE			签字 SIGN / 日期 DATE			

DEPARTMENT OF TRANSPORTATION

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Office of Structural Materials

Quality Assurance and Source Inspection



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(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-000375**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 02-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0269**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: 03-Jun-2009**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector observed the Contractor perform base metal edge weld repair without cleaning and removing slag prior to welding. The part was identified as X82V and located on Floor Beam FB018A (FL3, PP026, OBG Segment 4BE).

Contractor's proposal to correct the problem:

Remove defect and perform NDT to ensure repair is free of defects. Increase interpass cleaning and training of NDT technicians.

Corrective action taken:

Contractor submitted Critical Weld Repair (CWR 568) along with required MT report confirming that the repair is in compliance.

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 1347 246 3441, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim **Quality Assurance Inspector****Reviewed By:** Wahbeh, Mazen **QA Reviewer**