

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-000482**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 17-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0455**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: 6AW Deck Panel
Procedural	Procedural	Description:	Unapproved base metal repair for distortion

Reference Description: Distortion near the 6AW deck panel splice weld was repaired by unapproved base metal repair

Description of Non-Conformance:

The Quality Assurance (QA) Inspector observed that the distortion of the 6AW deck panels (DP273, DP192, DP219) near the splice weld was repaired by ZPMC performing base metal repair on the deck surface. The Deck Plate splice weld numbers were identified as SEG027*-006, 004. ZPMC was observed depositing SMAW filler material in repair areas approximately 250mm x 100mm. This base metal repair was performed without the approval of the Engineer.

**Applicable reference:**

AWS D1.5-2002 Section 3.7.4; Prior approval of the Engineer shall be obtained for repairs to base metal, or for a revised design to compensate for deficiencies.

Standard Specifications (99) section 55-3.02 Straightening of Material; "If straightening is necessary, it shall be done by methods acceptable to the Engineer. Details for methods proposed for straightening shall be submitted in writing to the Engineer prior to their use.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

ZPMC WQCP Section 9 “Weld Repair Procedures”.

Who discovered the problem: Chandra Kumar Sudulaimuthu

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 1030 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1130 hours, Email

QC Inspector's Name: Zhang Qiang

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Carreon,Albert	Lead Reviewer/Task Leader
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: 17-Nov-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: 05.03.06-000445

Subject: NCR No. ZPMC-0455

Reference Description: Distortion near the 6AW deck panel splice weld was repaired by unapproved base metal repair

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:** 06

Remarks:

The Quality Assurance (QA) Inspector observed that the distortion of the 6AW deck panels (DP273, DP192, DP219) near the splice weld was repaired by ZPMC performing base metal repair on the deck surface. The Deck Plate splice weld numbers were identified as SEG027*-006, 004. ZPMC was observed depositing SMAW filler material in repair areas approximately 250mm x 100mm. This base metal repair was performed without the approval of the Engineer.

Action Required and/or Action Taken:

Submit a repair procedure for approval of the engineer.

Transmitted by: Bill Howe

Attachments: ZPMC-0455

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000445

Subject: NCR No. ZPMC-0455

Dated: 11-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000476 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will submit a CWR to reflect the work completed as well as all welding and inspection data at a later date to close this NCR.

ZPMC will submit a CWR to reflect the work completed as well as all welding and inspection data at a later date to close this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000476R00

Caltrans' comments:

Status: REJ

Date: 12-Jan-2010

This NPR is rejected because it does not address providing adequate training to MT technicians to lessen these occurrences.

Submitted by: Howe, Bill

Attachment(s):

Date: 12-Jan-2010

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000445

Subject: NCR No. ZPMC-0455

Dated: 14-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000476 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has generated an internal NCR to address this issue as well as provided a WRR to document the procedure used for repair and to track the location and inspections performed.

ZPMC performed base metal repair without notifying the Engineer. ZPMC has generated an internal NCR to address this issue as well as provided a WRR to document the procedure used for repair and to track the location and inspections performed. See attached documents. ZPMC requests closure of this NCR.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000476R01;

Caltrans' comments:

Status: CLO

Date: 24-Jan-2010

The documentation submitted by the contractor has been reviewed by the Engineer and is found to be acceptable.

Submitted by: Chao, Ching

Attachment(s):

Date: 24-Jan-2010



No. B-577

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-1-12

REGARDING: NCR-00482 (ZPMC-0455)

With this letter of response, ZPMC requests closure of CT NCR-00482 (ZPMC-0455), what mentioned that CT Inspector observed unapproved base metal repair for distortion.

- ZPMC acknowledged this problem and has issued internal NCR. See attached NCR-B-308(ZPMC-0455).
- To rectify the distortion between Deck Panel, buttering were performed beside weld SEG027*-006 & SEG027*-004.
- A misunderstanding of the requirement to get approval from Engineer prior to NON-SPCM base metal repair occurred by ZPMC.
- These repair works are reflected in WWR issued by ZPMC.
- NDT was performed to warrant the quality.

Based on the taken actions and attached documentations, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-B-308(ZPMC-0455)

NCR-00482 (ZPMC-0455)

B-WR8241

B787-MT-15071

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

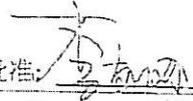
1/12/10

Prevention of Re-occurrence:

预防措施:

加强对现场施工人员的培训。
Enhance training worker on-site.

Approved by/批准:



Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据:

附件

无附件

请参考焊接返修报告 WR-8241 附件操作

Operate according to Welding Repair Report (WR-8241) disposition.

Reviewed /批准:

Tang Yongbo

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Verified by QCI/质检确认:

Reviewed by QCA/质检主任审核:

#R787-QCP-1300

330 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR. A JV
375 BURMA ROAD
OAKLAND CA 94607

Date: 17-Nov-2009

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

Dear: Mr. Charles Kanapick
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0455

Job Name: SAS Superstructure
Document No: 05.03.06-000445

Reference Description: Distortion near the 6AW deck panel splice weld was repaired by unapproved base metal repair

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Lift: 06

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cc: Rick Morrow, Gary Pursell, Peter Siegenthaier, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

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Bay Area Branch
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 (707) 649-5453
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Contract #: 04-0120F4
 City: SEALA 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-000482

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 17-Oct-2009

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

NCR #: ZPMC-0455

Type of problem:

Welding Concrete Other

Welding Curing Procedural Bridge No: 34-0006

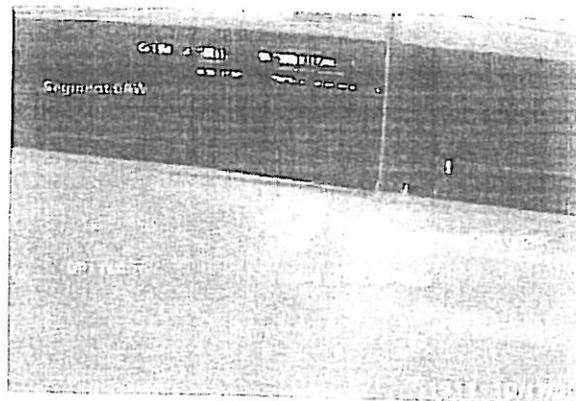
Joint fit-up Coating Other Component: 6AW Deck Panel

Procedural Procedural Description: Unapproved base metal repair for distortion

Reference Description: Distortion near the 6AW deck panel splice weld was repaired by unapproved base metal repair

Description of Non-Conformance:

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QUALITY ASSURANCE - NON-CONFORMANCE REPORT

(Continued Page 1 of 2)

ZPMC WQCP Section 9 "Weld Repair Procedures"

Who discovered the problem: Chandra Kumar Sudulainulla

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 1030 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1130 hours, Email

QC Inspector's Name: Zhang Qiang

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon, Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh, Mazen

SMR



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	6AW	报告编号 Report No.	B-WR8241
合同号 Contract No.:	04-0120F4	部件名称 Items Name	6AW 顶板 6AW deck plate	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

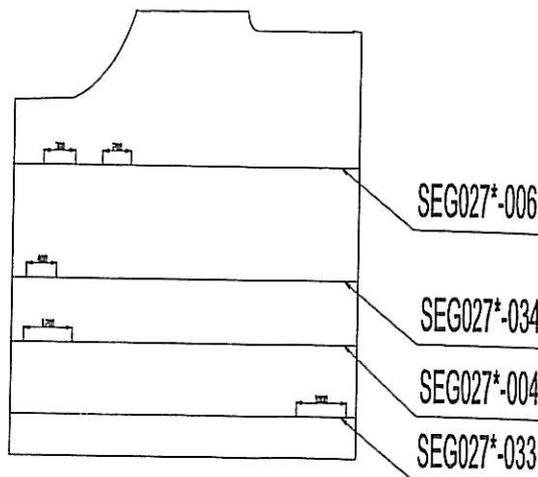
Description of welding discontinuity:

顶板拼接缝两侧, 有5处母材损伤, 最大深度4MM.最大宽100MM.度具体位置见下图;

Two side at deck plate butt weld, the base metal gouged, maximum 4mm in depth, 100mm in wide, total 5 position, the detail position sees following draft.

检验员 (Inspector): zhang qiang 日期(Date): 09.10.17

焊缝返修位置示意图:

Draft of welding discontinuity:

产生原因:

Caused:

工人操作失误, 导致母材损伤。

Worker operated error caused base metal gouged.

车间负责人(Foreman): *Lit Hai fei* 日期(Date): *09.10.18*

处理意见

Disposition :

1. 按照焊接返修工艺规程 (WPS) 打磨缺陷区域;
 2. 对该区域作100%MT检查, 确保缺陷全部去除;
 3. 根据批准的焊接返修工艺规程 (WPS) 进行预热及焊接;
 4. 将焊接区域打磨至与母材平齐;
 5. 对修补区域进行VT和MT检测,检测范围为返修区域以及返修两端各延长50mm;
-
1. Remove all the defects according to the approved repair WPS by means of grinding.
 2. Verify with MT and VT no defects remain in the repair area prior to weld;
 3. Preheat and weld according to the relevant WPS.
 4. Grind the weld flush with base metal after welding.
 5. Perform VT and MT inspection of the repaired area along with an additional 50mm at each end of the weld repair.

工艺: *Hexiao Lin*
Technical engineer

09.10.18

审核: *Lu Hanhua*
Approved by

日期 *09.10.18*
Date



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	6AW	报告编号 Report No.	B-WR8241
合同号 Contract No.:	04-0120F4	部件名称 Items Name	6AW 顶板 6AW deck plate	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

培训和教育操作工, 提高操作水平。

Train and educate operator to improve operation skill.

车间负责人(Foreman): *Li Haifei* 日期(Date): *09.10.18*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1 WPS-345-SMAW-4 G(4F)-Repair	工艺员 technologist	<i>HexiaoLin</i> <i>09.10.18</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>N/A</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>86°C</i>
最大碳刨深度 Max. depth of gouging	<i>N/A</i>	碳刨总长 Total length of gouging	<i>N/A</i>
焊工 welder	<i>045240</i>	焊接类型 welding type	<i>FCAW</i>
焊接电流 Current	<i>317</i>	焊接电压 Voltage	<i>30.4</i>
		焊接位置 position	<i>1G</i>
		焊接速度 Speed	<i>340</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>Li Haifei</i> <i>07/20201</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Sun Gongcheng</i>
日期 Date		日期 Date	<i>2009.10.18</i> <i>09.10.20</i>
见证: Witness/Review:			
备注: Remark:			

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-000469**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 22-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0455**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: 17-Oct-2009**Description of Non-Conformance:**

The Quality Assurance (QA) Inspector observed that the distortion of the 6AW deck panels (DP273, DP192, DP219) near the splice weld was repaired by ZPMC performing base metal repair on the deck surface. The Deck Plate splice weld numbers were identified as SEG027*-006, 004. ZPMC was observed depositing SMAW filler material in repair areas approximately 250mm x 100mm. This base metal repair was performed without the approval of the Engineer.

Contractor's proposal to correct the problem:

Submit Welding Repair Report (WRR) for tracking and perform NDT to verify the welds are in conformance with Contract specifications.

Corrective action taken:

Contractor submitted a WRR documenting the procedure and locations along with NDT documentation verifying the welds are in conformance with Contract specifications. ZPMC also issued an internal NCR regarding the issue.

Did corrective action require Engineer's approval? Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?** Yes No**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Jim Simonis, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer