

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

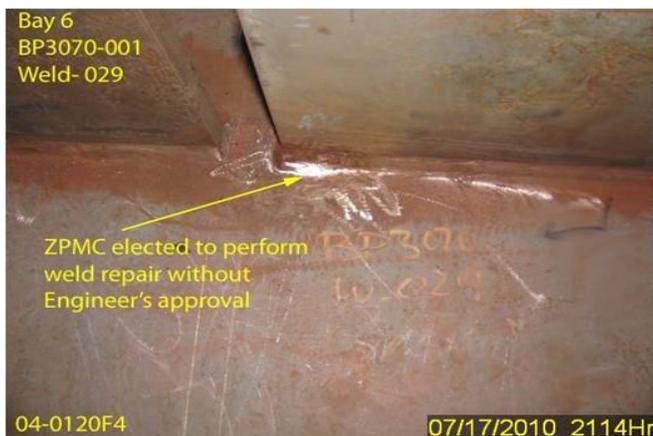
Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, China**Report No:** NCR-000806**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 17-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0768**Type of problem:**

| | | | |
|---------------------|-------------------|---------------------|---------------------------|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: BP3070A |
| Procedural | Procedural | Description: | |

Reference Description: Critical Weld Repair (SPCM) without Prior Approval from Engineer**Description of Non-Conformance:**

During Quality Assurance (QA) random in-process observations of the fabrication of Orthotropic Box Girder (OBG) Bottom Panel BP3070-001 discovered the following issue:

- Weld metal / base metal crack repair performed on Seismic Performance Critical Member (SPCM) without prior Engineer's approval.
 - The repair was performed on fillet weld identified as BP3070-001-029.
 - This weld was previously tested and rejected by Caltrans (CT) QA.
 - The indication was confirmed as a crack using the Magnetic particle Testing (MT) method.
 - ZPMC workers removed a portion of the weld and ground approximately 4mm into the SPCM bottom plate to remove the crack entirely.
 - The weld is a fillet weld T-joint, joining stiffener identified as RS3415M to SPCM bottom plate identified as PL3380A.
 - The repair area is approximately 10mm from the east end of the stiffener (nearest to PP124).
- For further information, please see the attached picture below.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

AWS D1.5 2002, Section 12.17.4: Except as provided in 12.17.2, all welded repairs shall be considered critical.

They include, but are not limited to the following:

(4) Repair of cracks in base metal and welds including lamellar tears except as provided in 12.17.2 (5)

AWS D1.5 Sec 12 par. 12.17.4: All critical weld repairs to base metal and welds shall be approved by the Engineer prior to beginning the repair and shall be documented giving details of the type of discontinuity and extent of repair.

Who discovered the problem: Kenneth Riley

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 10:30_7/18/10_Email

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 8:00_7/19/10_Email

QC Inspector's Name: Mr. Tao Lai

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

| | | |
|----------------------|-----------|-----|
| Inspected By: | Devey,Jim | SMR |
|----------------------|-----------|-----|

| | | |
|---------------------|--------------|-----|
| 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 **Date:** 19-Jul-2010
 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:** 05.03.06-000762
Subject: NCR No. ZPMC-0768

Reference Description: Critical Weld Repair (SPCM) without Prior Approval from Engineer

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:** 13

Remarks:

- During Quality Assurance (QA) random in-process observations of the fabrication of Orthotropic Box Girder (OBG) Bottom Panel BP3070-001 discovered the following issue:
- Weld metal / base metal crack repair performed on Seismic Performance Critical Member (SPCM) without prior Engineer's approval.
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- The weld is a fillet weld T-joint, joining stiffener identified as RS3415M to SPCM bottom plate identified as PL3380A.
- The repair area is approximately 10mm from the east end of the stiffener (nearest to PP124).

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Laraine Woo Transportation Engineer

Attachments: ZPMC-0768

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

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000762

Subject: NCR No. ZPMC-0768

Dated: 03-Sep-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000762 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the base metal indication in accordance with the approved CWR and is providing NDT after repair to show it is acceptable.

ZPMC has repaired the base metal indication in accordance with the approved CWR and is providing NDT after repair to show it is acceptable. ZPMC's QA engineers have written an internal NCR and brought this to the Production department's attention. ZPMC has identified the personnel involved and will monitor the specific individual's performance in the future. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000762R00;

Caltrans' comments:

Status: CLO

Date: 26-Sep-2010

The proposed resolution is acceptable. This NCR is considered closed.

Submitted by: Woo, Laraine

Date: 26-Sep-2010

Attachment(s):



No. B-865

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-09-02

REGARDING: NCR-000806(ZPMC-0768)

ZPMC acknowledged this problem and has issued an internal NCR. ZPMC QA personnel have talked with head of production department to address the requirement of engineer's approval prior to any critical repair. ZPMC is providing the NDT record to show the acceptance of this weld and based on this ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000806(ZPMC-0768)

B787-MT-24845 R2

A handwritten signature in black ink, appearing to be 'J. M.' followed by a flourish.

9/2/10



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: 19-Jul-2010

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: 05.03.06-000762

Subject: NCR No. ZPMC-0768

Reference Description: Critical Weld Repair (SPCM) without Prior Approval from Engineer

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Attachments: ZPMC-0768

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

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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, China

Report No: NCR-000806

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 17-Jul-2010

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

NCR #: ZPMC-0768

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: BP3070A
 Procedural Procedural Description:

Reference Description: Critical Weld Repair (SPCM) without Prior Approval from Engineer

Description of Non-Conformance:

During Quality Assurance (QA) random in-process observations of the fabrication of Orthotropic Box Girder (OBG) Bottom Panel BP3070-001 discovered the following issue:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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Time and method of notification: 10:30_7/18/10_Email

Name of Caltrans Engineer notified: Laraine Woo

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QC Inspector's Name: Mr. Tao Lai

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

NA

Comments:

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Inspected By: Devey,Jim

SMR

Reviewed By: Wahbeh,Mazen

SMR



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-24845R2 DATE日期 2010.07.25 PAGE OF页码 1/1 Revision No: 0

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

DRAWING NO. BP3070A CALTRANS CONTRACT NO.: 04-0120F4
 图号: BOTTOM PLATE 加州工程编号

| | | | |
|---|--|-------------------------------------|---|
| 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 , 2010 |
|---|--|-------------------------------------|---|

| | | | |
|-------------------------|----------------------------|-------------------------|-----------------------------------|
| 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 Continuous magnetic yoke CURRENT AC
 磁化方法 磁轭式连续法 电流

PARTICLE TYPE Dry magnet powder YOKE SPACING 70~150mm
 磁粉类型 干磁粉 磁轭间距

| | | |
|---------------------------------|---|--|
| 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 30/25mm |
|---------------------------------|---|--|

WELDING PROCESS SMAW TYPE OF JOINT T JOINT
 焊接方法 焊缝类型

| 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 | | | |
| BP3070-001-029 | 1R2 | | | ACC. | | 100%MT |
| | 2R2 | | | ACC. | | 100%MT |

AFTER B-CWR1730 REV0

BLANK

| | |
|--|---|
| EXAMINED BY主探 Huang jing <u>Huang Jing</u> LEVEL - II SIGN 签名 / DATE日期 2010.07.25 质量经理 / QCM | REVIEWED BY 审核 <u>Su Wei</u> LEVEL-II SIGN / DATE日期 2010.07.25 用户CUSTOMER |
| 签字 SIGN / 日期 DATE | 签字 SIGN / 日期 DATE |

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, China**Report No:** NCS-000811**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 26-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0768**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: 17-Jul-2010**Description of Non-Conformance:**

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- The repair area is approximately 10mm from the east end of the stiffener (nearest to PP124).

For further information, please see the attached picture below.

Contractor's proposal to correct the problem:

Contractor will repair the base metal indication in accordance with approved CWR, NDT will perform after repair. Contractor will provide the NDT report to show the repair weld is acceptable. Contractor will issue an internal NCR, and bring the Production department's attention. Contractor will identify the inspector, and monitor his performance.

Corrective action taken:

Contractor repaired the base metal indications with approved CWR, and NDT report is provided. The NDT report showed the weld is acceptable. Contractor issued an internal NCR, and brought the Production department's attention. Contractor identified and monitored the inspector.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Yes No

If so, name of Engineer providing approval:

Date:

Is Engineer's approval attached? Yes No

Comments:

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Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer