

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-000883

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 01-Nov-2010

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

NCR #: ZPMC-0845

Type of problem:

| | | | |
|---------------------|-------------------|---|--------------------------------------|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: OBG Steel Barriers |
| Procedural | Procedural | Description: Missed VT Indications by QC | |

Reference Description: QA found 2 missed VT cracks after ZPMC had tested and accepted these welds for the steel barriers

Description of Non-Conformance:

During Quality Assurance (QA) Visual Testing (VT) of welds located on OBG steel barriers, Caltrans (CT) QA Inspector discovered the following issues:

- Two Longitudinal cracks measuring approximately 10 to 15mm in length.
- The welds are identified as W5-SB3A-002-042 and W5-SB3-002-066 respectively.
- The welds are fillet welds, joining the web stiffener (W5-P-4) to the diaphragm (W5-P-5).
- The indications are clearly marked on the material near the weld.
- OBG steel barriers are located in Bay#16.
- The indications were discovered visually and confirmed by Magnetic particle Testing (MT) by Caltrans QA.
- The Notice of Witness Inspection Number (NWIT) is 007083. The cracks are located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. -As per contract documents ZPMC is required to perform 100% Visual Testing (VT) of these welds.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

-Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

-AWS D1.5 (02) Section 6.26.1.1 – “The Weld shall have no cracks.”

-Contract change order- CCO 77- 3.2- “Prior to submitting components for formal acceptance, the contractor shall implement in-process verification that shall include the following:

3.2.3 “All contract required visual inspections have been performed and is documented on the component as being acceptable”.

Who discovered the problem: Nagalingam Pandaram Pillai

Name of individual from Contractor notified: Peter Ferguson

Time and method of notification: 11-1-10 @ 2210hrs, Email

Name of Caltrans Engineer notified: Laraine Woo

Time and method of notification: 11-2-10 @ 0830hrs, Verbal

QC Inspector's Name: Ma Qian Li/ Testino

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

| | | |
|----------------------|-------------|-----|
| Inspected By: | Tsang, Eric | SMR |
|----------------------|-------------|-----|

| | | |
|---------------------|---------------|-----|
| Reviewed By: | Wahbeh, Mazen | SMR |
|---------------------|---------------|-----|

NCR PROPOSED RESOLUTION

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

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000841

Subject: NCR No. ZPMC-0845

Dated: 18-Nov-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000838 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the VT indications and confirmed their removal using MT and is providing NDT documentation after the repair to show the indication has been removed.

ZPMC has repaired the VT indications and confirmed their removal using MT and is providing NDT documentation after the repair to show the indication has been removed. ABFJV has noted which inspector was responsible for these missed indications and is monitoring his performance as well as all inspector performance, if he continues to miss indications disciplinary action will be undertaken. Based on these actions, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000838R00;

Caltrans' comments:

Status: CLO

Date: 21-Nov-2010

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

Submitted by: Woo, Laraine

Date: 21-Nov-2010

Attachment(s):



TRANSMITTAL LETTER

PROJECT: S.F.O.B.B.

DATE:2010-11-18

TO: ROSEMARY/ABF JV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: OBG NCR

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS

ENCLOSED WITH THIS TRANSMITTAL IS ONE COPY OF

- (01) LR: No. B-930
- (02) NCR-000883(ZPMC-0845)
- (03) VT after repair
- (04) B787-MT-31642

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:

Rosemary

DATE: 11/18/10

DELIVERED 18 NOV 2010

COMPANY: American Bridge / FLUOR

PHONE NO.

PLAN NUMBER:N/A
#R787-QCP-102



No. B-930

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-11-18

REGARDING: NCR-000883(ZPMC-0845)

ZPMC acknowledged this problem and addressed this issue by writing an internal NCR. ZPMC is providing the NDT records to show these indication have been fixed and re-tested to be appcptable. Based on this, ZPMC is requesting closure of this NCR.

ATTACHMENT:

NCR-000883(ZPMC-0845)

VT after repair

B787-MT-31642

by [signature]
11/18/2010



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: 04-Nov-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: 05.03.06-000841

Subject: NCR No. ZPMC-0845

Reference Description: QA found 2 missed VT cracks after ZPMC had tested and accepted these welds for the steel barriers

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: Barrier Rail

Lift:

Remarks:

During Quality Assurance (QA) Visual Testing (VT) of welds located on OBG steel barriers, Caltrans (CT)QA Inspector discovered the following issues:

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- OBG steel barriers are located in Bay#16.
- The indications were discovered visually and confirmed by Magnetic particle Testing (MT) by Caltrans QA.
- The Notice of Witness Inspection Number (NWIT) is 007083. The cracks are located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per contract documents, ZPMC is required to perform 100% Visual Testing (VT) of these welds.

Action Required and/or Action Taken:

Proposed 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-0845

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

File: 05.03.06

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File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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

Report No: NCR-000883

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 01-Nov-2010

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

NCR #: ZPMC-0845

Type of problem:

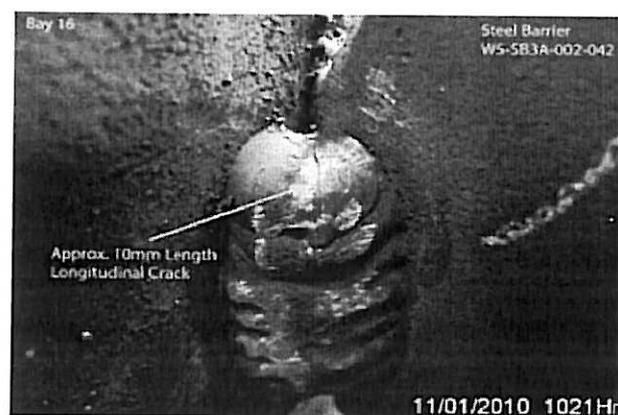
Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: OBG Steel BarriersProcedural Procedural Description: Missed VT Indications by QC

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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QC Inspector's Name: Ma Qian Li/ Testino

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

Comments:

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| | |
|-----------------------------------|-----|
| Inspected By: Tsang, Eric | SMR |
| Reviewed By: Wahbeh, Mazen | SMR |



| | |
|----|-----------|
| 周数 | 157# |
| 日期 | 2010.11.3 |

Visual Weld Inspection Report

焊缝目视检查报告

| | |
|-------------------------------|-------------------------------------|
| Calltrans Contract No. 加州合同编号 | 04-0120F4 |
| Project No.: 项目名称 | San Francisco Oakland Bay Bridge 美国 |
| Project No.: 编号: | ZP06-787 |

| | |
|----------------------------|----------------|
| Welder I.D.# 焊工工识别号 | 201905 |
| Location 位置 | 3F |
| Welding consumables 焊接材料 | TL508H4 (Φ4.0) |
| Undercut 咬边 | ✓ |
| Porosity 气孔 | ✓ |
| Over lap 焊瘤 | ✓ |
| Crater 弧坑 | ✓ |
| Arc strike 电弧擦伤 | ✓ |
| Spatters 飞溅 | ✓ |
| Crack 裂纹 | ✓ |
| Accept or Reject 接受或拒收 | ACC |
| Repair 返修 | NA |
| or Reject after repair 返修后 | NA |

| | |
|---|------------------|
| Quality Assurance Manager ~Approval 质量控制经理: | Mr. Tan (201573) |
|---|------------------|

| | |
|-----------------------|------------------------|
| Girder/梁: | OBG Plate Panel Splice |
| Tower/塔: | |
| Representative: 质检代表: | |
| CWI: 检验员: | |

| | | | |
|---|---|---|---------------------------------|
| <input type="checkbox"/> After root weld | <input type="checkbox"/> After cover pass | <input type="checkbox"/> After HSR No.: | <input type="checkbox"/> Others |
| <input checked="" type="checkbox"/> After CWR or WRR No.: B-CWR2106 | | | |

#R787-QCP-603

"✓" is no defects. "X" is defects. "NA" is not applicable.



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-31642 DATE日期 2010.11.03 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: W5 STEEL BARRIER 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. 28ST, 2010

EQUIPMENT 设备: MT YOKE MANUFACTURER 制造商: USA MODEL NO. 样式编号: MODEL #ES-X SERIAL NO. 连续编号: 14236

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: WELDING 焊接件, CASTING 铸件, FORGING 锻造 Material & thickness 母材,厚度: A709M-345T2-X, 12mm

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

| 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 | | | |
| W5-SB3-002-066 | | | | ACC. | | 100%MT |
| W5-SB3A-002-042 | | | | ACC. | | 100%MT |

BLANK

| | |
|---|---|
| EXAMINED BY主探 HUANG ZHENGCHAO LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM | REVIEWED BY 审核 _____ LEVEL-II SIGN / DATE日期 用户CUSTOMER _____ 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, P.R. China**Report No:** NCS-000833**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Nov-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0845**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: 01-Nov-2010**Description of Non-Conformance:**

During Quality Assurance (QA) Visual Testing (VT) of welds located on OBG steel barriers, Caltrans (CT) QA Inspector discovered the following issues:

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Contractor's proposal to correct the problem:

ZPMC to repair the VT indications noted in the NCR and provide NDT documentation to confirm the indications removed and repaired. The inspector involved has been identified and his performance will be closely monitored. Appropriate disciplinary action will be taken should his performance is not improved in future.

Corrective action taken:

The missed VT indications have been removed and NDT report has been submitted to verify the repair has been completed satisfactorily. The inspector involved was disciplined and his performance is being monitored

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

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(*Continued Page 2 of 2*)

Yes No

Comments:

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| | | |
|----------------------|--------------|-----------------------------|
| Inspected By: | Ng,Michael | Quality Assurance Inspector |
| Reviewed By: | Wahbeh,Mazen | QA Reviewer |
