

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-000975**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Jan-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0934**Type of problem:**

| | | | |
|---------------------|-------------------|---------------------|--|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: Lift 13AW, Welds SEG3013Y-363, 369 |
| Procedural | Procedural | Description: | |

Reference Description: Missed UT Indications Discovered by Quality Assurance on Lift 13AW SA
Diaphragms to Floorbeam Stiffeners

Description of Non-Conformance:

During the Quality Assurance Ultrasonic Testing (UT) verification of welds located on OBG Lift 13A West, this Quality Assurance (QA) Inspector discovered the following issues:

- One class "A" longitudinal indication measuring approximately 20mm in length.
- The depth of the indication is 27mm from face A.
- The db rating is +5.
- The material thickness is 35mm.
- The weld is identified as: SEG3013Y-363.
- The Weld is a Complete Joint Penetration (CJP), Tee-joint, joining the Stiffener X4357C of Floorbeam FB3187A to the Sub Assembly (SA) plate SA3167A at Panel point (PP) 119.
- The "Y" location of the indication is 155mm from the free edge of the stiffener (as shown in attached photograph).
- The indication is clearly marked on the component.
- The material is identified as Seismic Performance Critical Member (SPCM).
- The member is located in Bay 14.

- Two class "A" longitudinal indications measuring approximately 20mm and 22mm in length respectively.
- The depth of the indications is 30mm and 31mm respectively from face A.
- The db rating is +7 for each.
- The material thickness is 35mm.
- The weld is identified as: SEG3013Y-369.
- The Weld is a Complete Joint Penetration (CJP), Tee-joint, joining the stiffener X4357A of Floorbeam FB3191A to the Sub Assembly (SA) plate SA3167B at Panel point (PP) 119-1500.
- The "Y" location of the indications is 20mm and 120mm respectively from the free edge of the stiffener (as

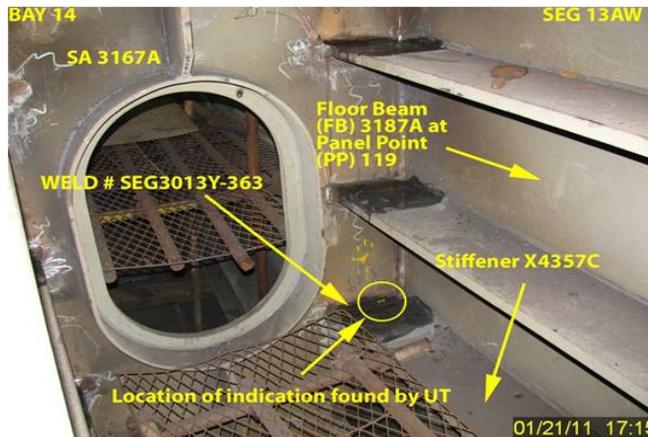
QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)

shown in attached photograph).

- The indication is clearly marked on the component.
- The material is identified as Seismic Performance Critical Member (SPCM).
- The member is located in Bay 14.

The Notice of Witness Inspection Number (NWIT) is 08254. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of these welds. Attached photographs provide additional location details.



Applicable reference:

AWS D1.5-02 Section 6.6.2 "The Contractor shall be responsible for visual inspection and NDT described in 6.7 and necessary correction of all deficiencies in materials and workmanship in conformance with the requirements of Clause 3 and 6.26 and as specified elsewhere in the contract documents."

AWS D1.5-02 Table 6.3 "Specifies a class A indication for material thicknesses greater than 20mm through 38mm as having a db rating of +8 and lower."

Who discovered the problem: Umesh D. Gaikwad

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 17:30, 01/21/11

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 09:00, 01/24/11, Email

QC Inspector's Name: Wang Lu

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.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)

Inspected By: Devey,Jim

SMR

Reviewed By: Wahbeh,Mazen

SMR



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: 24-Jan-2011

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: 05.03.06-000932

Subject: NCR No. ZPMC-0934

Reference Description: Missed UT Indications Discovered by Quality Assurance on Lift 13AW SA Diaphragms to Floorbeam Stiffeners

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 the Quality Assurance Ultrasonic Testing (UT) verification of welds located on OBG Lift 13A West, this Quality Assurance (QA) Inspector discovered the following issues:

- One class "A" longitudinal indication measuring approximately 20mm in length.
- The depth of the indication is 27mm from face A.
- The db rating is +5.
- The material thickness is 35mm.
- The weld is identified as: SEG3013Y-363.
- The Weld is a Complete Joint Penetration (CJP), Tee-joint, joining the Stiffener X4357C of Floorbeam FB3187A to the Sub Assembly (SA) plate SA3167A at Panel point (PP) 119.
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- The indication is clearly marked on the component.
- The material is identified as Seismic Performance Critical Member (SPCM).
- The member is located in Bay 14.

- Two class "A" longitudinal indications measuring approximately 20mm and 22mm in length respectively.
- The depth of the indications is 30mm and 31mm respectively from face A.
- The db rating is +7 for each.
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NCT

(Continued Page 2 of 2)

- The material is identified as Seismic Performance Critical Member (SPCM).
- The member is located in Bay 14.

The Notice of Witness Inspection Number (NWIT) is 08254. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of these welds.

Action Required and/or Action Taken:

Propose a resolution for this non-conformance and provide documentation that the deficiency has been brought into compliance with the contract requirements. Propose a resolution that addresses the apparent failure of Quality Control to identify the indication. Additionally, provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

The response for the resolution of this issue is requested within 7 days.

Transmitted by: Sean Eagen Transportation Engineer

Attachments: ZPMC-0934

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000932

Subject: NCR No. ZPMC-0934

Dated: 04-Mar-2011

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000933 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC acknowledges that this indication was missed.

ZPMC acknowledges that this indication was missed. Inspectors who miss indications are being tracked and retrained if they consistently miss indications. In this case the inspector was retained and retrained. ZPMC has also written an internal NCR for this incident to document and make sure responsible parties are aware. Based on this and attached acceptable NDT, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000933R00;

Caltrans' comments:

Status: CLO

Date: 06-Mar-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0934 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 06-Mar-2011



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

DATE:2011-03-04

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-977

(02) NCR-000975(ZPMC-0934)

B787-UT-20276R1

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT

PLAN HOLDER:



DATE: 10:14
 RECEIVED 04 MAR 2011

COMPANY:



PHONE NO.

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



No. B-977

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2011-03-04

REGARDING: NCR-000975(ZPMC-0934)

ZPMC acknowledged this problem and has issued an internal NCR. ZPMC has repaired the indications noted in the NCR and is providing NDT documentation after the repair to show the indication has been removed. Based on these actions, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000975(ZPMC-0934)

B787-UT-20276 R1

Zhang Wei
3/4/11

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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-000975**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Jan-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0934**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Lift 13AW, Welds SEG3013Y-363, 369Procedural Procedural Description:**Reference Description:** Missed UT Indications Discovered by Quality Assurance on Lift 13AW SA
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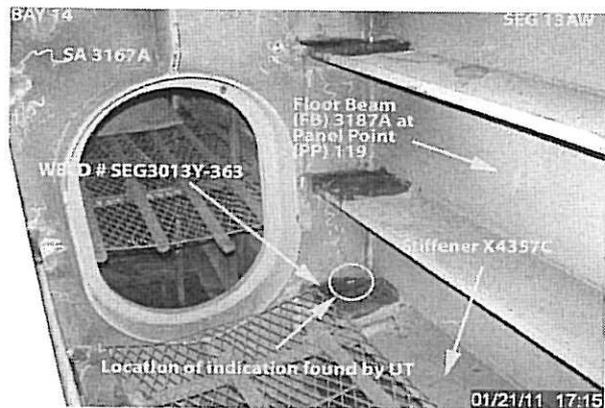
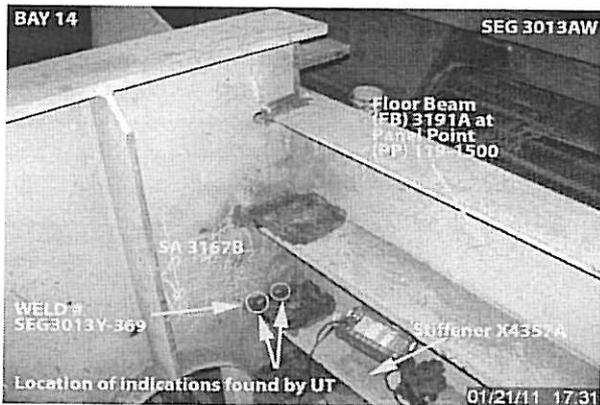
QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)

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Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 17:30, 01/21/11

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 09:00, 01/24/11, Email

QC Inspector's Name: Wang Lu

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.



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-20276R1 DATE 2011.03.03 PAGE 4 OF 1 Revision No: 0

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

ITEMS NAME: 13AW FLOOR BEAM DRAWING NO.: SEG3013Y CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002(Table 6.3) PROCEDURE NO. 程序编号 ZPQC-UT-01

WELDING PROCESS 焊接方法 SMAW JOINT TYPE 焊缝类型 T JOINT CALIBRATION DUE DATE 仪器校正有效期 Dec. 28ST, 2011

EQUIPMENT 设备 MANUFACTURER 制造商 PANAMETRICS MODEL NO. 样式编号 EPOCH XT SERIAL NO. 序列编号 070150911

CALIBRATION BLOCK 试块 AWS IIW BLOCK TYPE II COUPLANT 耦合剂 C.M.C MATERIAL/THICKNESS 材料厚度 A709M-345T2 25/35mm

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 |
|-----------------------|----------|--------------|---------------|------------------|----------|--------------|---------|
| AMERICA | 70° | 2.25MHz | 0.75×0.625 in | | | | |
| 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 |
| SEG3013Y-363 | 1RI | 68.6 | | | | 49.0 | | | | | | | | | ACC. | 100% |
| SEG3013Y-369 | 1RI | 68.6 | | | | 49.0 | | | | | | | | | ACC. | 100% |
| | 2RI | 68.6 | | | | 49.0 | | | | | | | | | ACC. | 100% |

AFTER B-WR20281 REV0

BLANK

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| | |
|--|--|

EXAMINED BY 主探 Tang Kijshen 2011.03.03 REVIEWED BY 审核 Kwok Yung 2011.03.03
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM [Signature] 用户CUSTOMER _____
 签字 SIGN / 日期 DATE 签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION

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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, China**Report No:** NCS-000954**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0934**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: 21-Jan-2011**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) verification of welds located on OBG Lift 13A West, this Quality Assurance (QA) Inspector discovered the following issues:

- One class "A" longitudinal indication measuring approximately 20mm in length.
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