

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-000773**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 22-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0735**Type of problem:**

| | | | |
|---------------------|-------------------|--|---|
| Welding | Concrete | Other | |
| Welding | Curing | Procedural | Bridge No: 34-0006 |
| Joint fit-up | Coating | Other | Component: Suspender Bracket for Segment 7EW |
| Procedural | Procedural | Description: Missed UT indication by QC | |

Reference Description: QA found an UT Indication after the contractor's had tested and accepted a weld on the Suspender Bracket for Segment 7EW

Description of Non-Conformance:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB60E, this QA Inspector discovered the following issues:

- One (1) class "A" rejectable longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +4.
- Material thickness is 20mm.
- The depth of the indication is approximately 14mm.
- The weld is identified as SB015-060-019 (Segment 7EW).
- The weld is Complete Joint Penetration (CJP) "T" joint.
- The weld is joining between X53A to X53B.
- The weld is designated as a Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 5 mm from cope hole.
- Suspender Bracket SB60E is located at Bay#19.

The Notice of Witness Inspection (NWIT) No. is 006035. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6; Table 6.3: specifies a class "A" indication as having a rating of 10dbs and under for material thicknesses 8mm through 20mm.

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."

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jun

Time and method of notification: 1630 hours, 06/22/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 0730 hours, 6/23/10, Email

QC Inspector's Name: Xu Tao

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric SMR

Reviewed By: Devey, Jim 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-Jun-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: 05.03.06-000731

Subject: NCR No. ZPMC-0735

Reference Description: QA found an UT Indication after the contractor's had tested and accepted a weld on the Suspender Bracket for Segment 7EW

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:** 07

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB60E, this QA Inspector discovered the following issues:

- One (1) class "A" rejectable longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +4.
- Material thickness is 20mm.
- The depth of the indication is approximately 14mm.
- The weld is identified as SB015-060-019 (Segment 7EW).
- The weld is Complete Joint Penetration (CJP) "T" joint.
- The weld is joining between X53A to X53B.
- The weld is designated as a Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 5 mm from cope hole.
- Suspender Bracket SB60E is located at Bay#19.

The Notice of Witness Inspection (NWIT) No. is 006035. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

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: Sean Eagen Transportation Engineer

Attachments: ZPMC-0735

NCT

(Continued Page 2 of 2)

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: 05.03.06-000731

Subject: NCR No. ZPMC-0735

Dated: 13-Jul-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000727 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the weld identified in the NCR and is providing NDT documentation to show the weld is acceptable.

ZPMC has repaired the weld identified in the NCR and is providing NDT documentation to show the weld is acceptable. As stated in ZPMC's letter of response, ZPMC QA has discussed this issue with the head of the NDT Department, who is will address the issue through greater oversight by supervisors. ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000727R00;

Caltrans' comments:

Status: CLO

Date: 18-Jul-2010

The NDT documentation submitted and the preventive measures taken by the Contractor are acceptable. This NCR is considered closed.

Submitted by: Woo, Laraine

Date: 18-Jul-2010

Attachment(s):



No. B-821

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-7-13

REGARDING: NCR-000773(ZPMC-0735)

ZPMC has finished the repairs and is providing the NDT record shows the missed indication is acceptable now. ZPMC QA personnel have talked with the chief of NDT department regarding the unsatisfied increasing of missed indications. ZPMC's NDT inspector will pay more attention when performing NDT testing. Based on this, ZPMC is requesting closure of this NCR.

ATTACHMENT:

N CR-000773(ZPMC-0735)

B787-UT-13824

[Handwritten signature]
7/13/10



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-Jun-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: 05.03.06-000731

Subject: NCR No. ZPMC-0735

Reference Description: QA found an UT Indication after the contractor's had tested and accepted a weld on the Suspender Bracket for Segment 7EW

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: 07

Remarks:

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB60E, this QA Inspector discovered the following issues:

- One (1) class "A" rejectable longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +4.
- Material thickness is 20mm.
- The depth of the indication is approximately 14mm.
- The weld is identified as SB015-060-019 (Segment 7EW).
- The weld is Complete Joint Penetration (CJP) "T" joint.
- The weld is joining between X53A to X53B.
- The weld is designated as a Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 5 mm from cope hole.
- Suspender Bracket SB60E is located at Bay#19.

The Notice of Witness Inspection (NWIT) No. is 006035. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

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: Sean Eagen Transportation Engineer

Attachments: ZPMC-0735

NCT

(Continued Page 2 of 2)

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

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-000773**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 22-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0735**Type of problem:**Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006Joint fit-up Coating Other Component: Suspender Bracket for Segment 7EWProcedural Procedural Description: Missed UT indication by QC**Reference Description:** QA found an UT Indication after the contractor's had tested and accepted a weld on the Suspender Bracket for Segment 7EW**Description of Non-Conformance:**

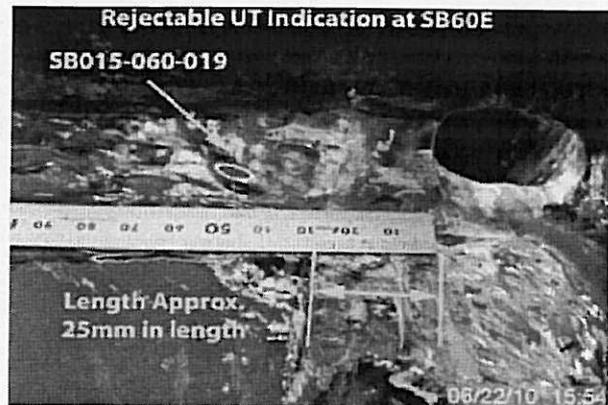
During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB60E, this QA Inspector discovered the following issues:

- One (1) class "A" rejectable longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +4.
- Material thickness is 20mm.
- The depth of the indication is approximately 14mm.
- The weld is identified as SB015-060-019 (Segment 7EW).
- The weld is Complete Joint Penetration (CJP) "T" joint.
- The weld is joining between X53A to X53B.
- The weld is designated as a Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 5 mm from cope hole.
- Suspender Bracket SB60E is located at Bay#19.

The Notice of Witness Inspection (NWIT) No. is 006035. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5-02 Section 6; Table 6.3: specifies a class "A" indication as having a rating of 10dbs and under for material thicknesses 8mm through 20mm.

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."

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Peng Wen Jun

Time and method of notification: 1630 hours, 06/22/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 0730 hours, 6/23/10, Email

QC Inspector's Name: Xu Tao

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 Jim Devey, (86) 150-0002-6784, who represents the Office of Structural Materials for your project.

| | | |
|----------------------|-------------|-----|
| Inspected By: | Tsang, Eric | SMR |
| Reviewed By: | Devey, Jim | SMR |

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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000695**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 18-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0735**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: 22-Jun-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) Suspender Bracket SB60E, this QA Inspector discovered the following issues:

- One (1) class "A" rejectable longitudinal linear indication measuring approximately 25mm in length.
- The indication dBs rating is a +4.
- Material thickness is 20mm.
- The depth of the indication is approximately 14mm.
- The weld is identified as SB015-060-019 (Segment 7EW).
- The weld is Complete Joint Penetration (CJP) "T" joint.
- The weld is joining between X53A to X53B.
- The weld is designated as a Non Seismic Performance Critical Material (Non SPCM).
- The indication is clearly marked on or near the weld.
- The Y distance for this indication is 5 mm from cope hole.
- Suspender Bracket SB60E is located at Bay#19.

The Notice of Witness Inspection (NWIT) No. is 006035. The indication is located within the area previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform hundred (100%) percent UT inspection of this weld.

Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor supplied post repair NDT documentation verifying weld conforms with Contract weld quality requirements. An internal NCR was also issued by ZPMC in regards to this issue.

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:

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