

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, PRC**Report No:** NCR-000106**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 06-Apr-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0103**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Tower Diaphragm
Procedural	Procedural	Descriptor:	Finger Dampening of UT signals

Reference Description: Caltrans Special Provisions 8-3.01 Welding**Description of Non-Conformance:**

A ZPMC Quality Control (QC) Inspector, Ma Ji Long, was observed using unapproved procedures while performing Ultrasonic Testing on the on Complete Joint Penetration (CJP) Tower Skin plate weld number SSD1-SS16-F/J-6A. During the UT inspection high amplitude ultrasonic signals were observed when scanning the weld toe areas. The QA inspector observed that the UT signals were "finger dampened" in order to decrease the amplitude of the signals, this technique is not allowed by the Special Provisions.

Applicable reference:

Caltrans Special Provisions 8-3.01 Welding, "Questionable test results are defined as test results containing relevant or non-relevant indications or results from a situation where a defect may have been masked by the weld profile. Finger dampening the ultra-sonic (UT) signal shall not be considered resolution of questionable test results." and "Groove weld surface profiles that interfere with the performance of the NDT procedure or produce questionable test results shall be ground smooth and blended with the adjacent material."

Who discovered the problem: Kenneth Riley/Craig Hager, Quality Assurance Inspectors**Name of individual from Contractor notified:** Kevin Carpenter, ABF Quality Control Inspector**Time and method of notification:** 06-APR-08 at 1445, via phone conversation**Name of Caltrans Engineer notified:** Scott Kennedy, Structure Representative**Time and method of notification:** 04/07/08, 0900 hours, verbally**QC Inspector's Name:** Ma Ji Long, ZPMC Quality Control Inspector**Was QC Inspector aware of the problem:** Yes No**Contractor's proposal to correct the problem:**

None at this time.

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

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Inspected By: Wahbeh,Mazen

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer



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 Enterprises, a JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 10-Apr-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000083

Subject: NCR No. ZPMC-0103

Reference Description: Caltrans Special Provisions 8-3.01 Welding

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 - No Response Required.

Material Location: Tower **Lift:** 01

Remarks:

The QC inspector observed that the UT signals were "finger dampened" in order to reduce the amplitude during UT inspection on CJP of Tower skin plate. Note that the weld no. in the attached NCR should have been SSD1-SA16-F/G 6A. This is the same technique that resulted to issuance of NCR ZPMC-0098 and 0100.

Action Required and/or Action Taken:

Propose a resolution to ensure that this systematic none-conformance with the contract documents will not continue to occur and steps taken by the welding Quality Control Manager to prevent future occurrences.

Transmitted by: Ching Chao

Attachments: ZPMC-0103

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, 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: 05.03.06-000083

Subject: NCR No. ZPMC-0103

Dated: 26-Aug-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000112 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has been informed that the Contract does not allow finger damping as a means of acceptance

ZPMC has been informed that the Contract does not allow finger damping as a means of acceptance. All welds exceeding the reference levels and or requirements of the code shall be repaired.

Submitted by: Kanapicki, Charles

Attachment(s): ABF-NPR-000112R00

Caltrans' comments:

Status: CLO

Date: 28-Sep-2008

The proposed resolution is acceptable. Each of the finger dampened areas was re-inspected, and finger dampening during Ultrasonic Testing has no longer been an issue. The Department concurs that Non-Conformance ZPMC-0103 is closed.

Submitted by: Wright, Doug

Attachment(s):

Date: 28-Sep-2008

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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, PRC**Report No:** NCS-000065**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 16-Jun-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0103**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: 06-Apr-2008**Description of Non-Conformance:**

A ZPMC Quality Control (QC) Inspector, Ma Ji Long, was observed using unapproved procedures while performing Ultrasonic Testing on Complete Joint Penetration (CJP) Tower Skin plate weld number SSD1-SS16-F/J-6A. During the UT inspection high amplitude ultrasonic signals were observed when scanning the weld toe areas. The QA inspector observed that the UT signals were "finger dampened" in order to decrease the amplitude of the signals, this technique is not allowed by the Special Provisions.

Contractor's proposal to correct the problem:

ZPMC has generated an internal NCR to document the finger dampening. ZPMC states their inspector did not "restrain the signal or decrease the amplitude of the signal." In the future ZPMC will ensure that its inspectors do not finger dampen the weld during ultrasonic testing.

Corrective action taken:

In the future, ZPMC will comply with the Special Provisions, Section 8-3.01 Welding, which states "...Finger dampening the ultra-sonic (UT) signal shall not be considered resolution of questionable test results" and "Groove weld surface profiles that interfere with the performance of the NDT procedure or produce questionable test results shall be ground smooth and blended with the adjacent material."

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:**

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Inspected By: Ishibashi, Josh

Quality Assurance Inspector

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

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Reviewed By: Ishibashi,Josh

QA Reviewer