

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, PRC **Report No:** NCR-000344
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 11-Jul-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0318

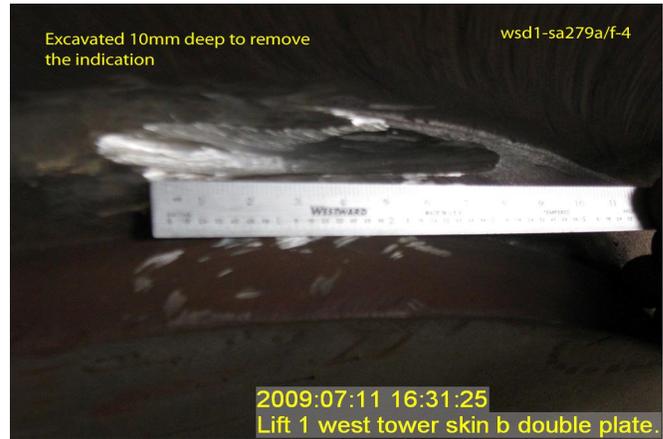
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower, Lift 1
Procedural	Procedural	Description: West Tower, Lift 1, Skin B Doubler Plate	

Reference Description: Missed MT indication on West Tower, Lift 1, Skin B Doubler Plate

Description of Non-Conformance:

During Magnetic Particle Testing (MT) of West Tower, Lift 1, Skin B doubler plate weld joint WSD1-SA279A/F-4, QA discovered one (1) round indication. ZPMC personnel excavated approximately 10mm deep for complete removal. This weld was previously tested and accepted by ZPMC QC MT technicians.



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 D1.5-2002, Section 3.7.2.3 – “Excessive Weld Porosity - Unacceptable portions shall be removed and rewelded.”

Who discovered the problem: Murugan Manikandan

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Mr. Chen

Time and method of notification: 7/11/09, 17:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 7/13/09, 8:00; Verbal

QC Inspector's Name: Zhen Jiadi

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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:** 14-Jul-2009
 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:** 05.03.06-000307
Subject: NCR No. ZPMC-0318

Reference Description: Missed Indication (MT) / West Shaft Lift 1 Skin B / Doubler Plate

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: Tower **Lift:** 01

Remarks:

During Magnetic Particle Testing (MT) of West Tower, Lift 1, Skin B doubler plate weld joint WSD1-SA279A/F-4, QA discovered one (1) round indication. ZPMC personnel excavated approximately 10mm deep for complete removal. This weld was previously tested and accepted by ZPMC QC MT technicians.

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 D1.5-2002, Section 3.7.2.3 – “Excessive Weld Porosity - Unacceptable portions shall be removed and rewelded.”

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance that addresses the failure of Quality Control to identify the indication (MT). Provide documentation of the steps/actions being taken by the Quality Control Manager to prevent future occurrences and the cause of the continuing failure to identify indications with Magnetic Particle Testing (MT).

Recent failures by Quality Control to identify indications have resulted in the issuance of NCR, ZPMC-0223, ZPMC-0234, ZPMC-0235, ZPMC-0250, ZPMC-0291, ZPMC-0293, ZPMC-0294, ZPMC-0295 and ZPMC-0309 related to Tower.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0318

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000307

Subject: NCR No. ZPMC-0318

Dated: 21-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000262 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000262R00;

Caltrans' comments:

Status: CLO

Date: 05-Aug-2009

The proposed resolution is acceptable. The welding inspectors have received additional training, and tests have been administered to ZPMC MT technicians to demonstrate their ability to detect MT indications. Also, the weld in question has been accepted by MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0318 is closed.

Submitted by: Wright, Doug

Date: 05-Aug-2009

Attachment(s):



No. T-041

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-7-16

REGARDING: NCR-000344 (ZPMC-0318)

ZPMC received NCR-000344 (ZPMC-0318), it mentioned that During MT of West tower, lift 1, skin B doubler plate weld joint WSD1-SA279A/F-4,QA discovered 1 round indication. ZPMC personnel excavated approximately 10mm deep for complete removal. This weld was previously tested and accepted by ZPMC QC MT technicians.

The situation is that the CT people Murugan Manikandan did the final VT/MT work for the doubler plate :

- 1、 The inspection area is not we ZPMC did the area, we ZPMC just did 25%.
- 2、 According to the AWS D1.5 section 6.26.1.5 the round indication The frequency of piping porosity in the surface of fillet welds shall not exceed one in 100mm(4in) or six in 1200mm (4ft) of welds length and the maximum diameter shall not exceed 2.4mm. In the truth the piping porosity in the surface the diameter less than 1mm.
- 3、 About the situation we as the process, grind the porosity, and did the repair work when we finished the repair work we did the MT again to make sure no problem on the welds, then the CT people Amit K. Juvekar recheck it to make sure that. And that day we finish the GREEN TAG on this doubler plate.

So ZPMC hope CT to close this NCR.

ATTACHMENT:

NCR-000344 (ZPMC-0318)

T787-MT-4991

Li Xinying
09.7.16



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: 14-Jul-2009
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: 05.03.06-000307
Subject: NCR No. ZPMC-0318

Reference Description: Missed Indication (MT) / West Shaft Lift 1 Skin B / Doubler Plate

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- 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: Tower Lift: 01

Remarks:

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AWS D1.5-2002, Section 3.7.2.3 - "Excessive Weld Porosity - Unacceptable portions shall be removed and rewelded."

Action Required and/or Action Taken:

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Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0318

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06

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Contract #: 04-0F20F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000344

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 11-Jul-2009

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

NCR #: ZPMC-0318

Type of problem:

Welding Concrete Other

Welding Curing Procedural **Bridge No:** 34-0006

Joint fit-up Coating Other **Component:** West Tower, Lift 1

Procedural Procedural **Description:** West Tower, Lift 1, Skin B Doubler Plate

Reference Description: Missed MT indication on West Tower, Lift 1, Skin B Doubler Plate

Description of Non-Conformance:

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Who discovered the problem: Murugan Manikandan

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Mr. Chen

Time and method of notification: 7/11/09, 17:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 7/13/09, 8:00; Verbal

QC Inspector's Name: Zhen Jiadi

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

Comments:

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Inspected By:	Sinevod,Serge	ASMR
Reviewed By:	Wahbeh,Mazen	SMR

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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-000224**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Jul-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0318**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: 11-Jul-2009**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) of West Tower, Lift 1, Skin B doubler plate weld joint WSD1-SA279A/F-4, QA discovered one (1) round indication. ZPMC personnel excavated approximately 10mm deep for complete removal. This weld was previously tested and accepted by ZPMC QC MT technicians.

Contractor's proposal to correct the problem:

Repair affected weld.

Corrective action taken:

The affected weld has been repaired and a NDT report indicating sound welds has been submitted. The weld has been verified by QA and green tagged.

To resolve the recurring failure for QC to detect MT indications, ABF has held verbal interviews with ZPMC QC and MT technicians on several occasions. ABF has requested ZPMC to provide an analysis of missed indications to determine if they can be traced to a personnel trend, such as an inspector, welder, or weld location. ABF has also informed ZPMC to ensure adequate lighting is provided during inspections. Tests have also been administered to ZPMC MT technicians to demonstrate their ability to detect MT indications.

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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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Sinevod,Serge

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer