

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-000249

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 24-Apr-2009

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

NCR #: ZPMC-0223

Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Lift 2, East Tower
Procedural	Procedural	Description: Lift 2, East Tower, CD Interior Corner Seam	

Reference Description: Missed MT indication on Lift 2, East Tower, CD interior corner seam

Description of Non-Conformance:

During random verification Magnetic Particle Testing (MT) of weld ESD1-TL7B/L-3A/B, QA discovered one transverse linear indication with a length of approximately 15mm. The weld is located at the skin plates C & D interior corner seam of East Tower, Lift 2. The "Y" location is approximately 52.5 meters. See the photographs below for additional information.



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 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks"

Who discovered the problem: Utekar Shrikant

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 13:30, 4-26-09, E-mail

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 13:30, 4-26-09, E-mail

QC Inspector's Name: Ma Qian Li

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

Reviewed By: Wahbeh,Mazen

SMR



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: 28-Apr-2009

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: 05.03.06-000216

Subject: NCR No. ZPMC-0223

Reference Description: Linear Indication overlooked by Quality Control / Tower East Shaft Lift 2 / CD Interior Corner Seam

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:** 02

Remarks:

During random verification Magnetic Particle Testing (MT) of weld ESD1-TL7B/L-3A/B, QA discovered one transverse linear indication with a length of approximately 15mm. The weld is located at the skin plates C & D interior corner seam of East Tower, Lift 2. The "Y" location is approximately 52.5 meters.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance that addresses the failure of Quality Control to identify the linear indication(NDT). Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0223

cc: Rick Morrow, Gary Pursell, Mark Woods, Jason Tom, Judy Li

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000216

Subject: NCR No. ZPMC-0223

Dated: 20-May-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000220 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has generated an internal NCR for this nonconformance, repaired and re-inspected the welds as required.

ZPMC has generated an internal NCR for this nonconformance, repaired and re-inspected the welds as required. Attached is documentation of work performed regarding this NCR. ZPMC requests this NCR be closed

Submitted by:

Attachment(s): ABF-NPR-000220R00

Caltrans' comments:

Status: REJ

Date: 27-May-2009

The proposed resolution is not acceptable. There is no attached documentation of the work performed as stated in the NPR.

Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences of the recurring issues regarding magnetic particle testing. Also, provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0223 at that time.

Submitted by: Wright, Doug

Date: 27-May-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000216

Subject: NCR No. ZPMC-0223

Dated: 08-Jun-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000220 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has now included the inspection documentation and requests closure of this NCR.
ZPMC has now included the inspection documentation and requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000220R01;

Caltrans' comments:

Status: REJ

Date: 11-Jun-2009

The proposed resolution is not acceptable. The proposed resolution did not address what steps were taken by the Quality Control Manager (QCM) to prevent future occurrences of this recurring issue as requested in both the Non-Conformance Transmittal (NCT-216) and the response to NPR-0220R00.

Provide documentation of the steps taken by the QCM to prevent future occurrences of the recurring issues regarding magnetic particle testing. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0223 at that time.

Submitted by: Wright, Doug

Date: 11-Jun-2009

Attachment(s):



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-3960

DATE日期 2009.05.08

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: ESD1-TL7B/L
THE 2ND LIFT TOWER(E) BOX ASSEMBLY

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, 2009

EQUIPMENT 设备
MT YOKE

MANUFACTURER 制造商
PARKER

MODEL NO. 样式编号
B310S

SERIAL NO. 连续编号
5620 5395 5617

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-Z
90 mm

WELDING PROCESS 焊接方法
SAW+FCAW

TYPE OF JOINT 焊缝类型
T-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			
ESD1-TL7B/L-3A				ACC.		100%MT
ESD1-TL7B/L-3B				ACC.		100%MT
ESD1-TL7B/L-4A				ACC.		100%MT
ESD1-TL7B/L-4B				ACC.		100%MT
BLANK						

EXAMINED BY主探
Lu Bzy
LEVEL - II SIGN 签名 / DATE日期 09.5.08
质量经理 / QCM
Lu Jianhua 2009.05.18
签字 SIGN / 日期 DATE

REVIEWED BY 审核
Xu Hai
LEVEL-II SIGN / DATE日期 09.5.08
用户CUSTOMER
签字 SIGN / 日期 DATE

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000216

Subject: NCR No. ZPMC-0223

Dated: 15-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000220 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ABFJV QCM has implemented training with ZPMC to improve the quality of inspections. ABFJV will provide documentation showing attendance by ZPMC QC inspectors and the subject of training.

ABF-NPR-000220R01 requested steps taken by ABFJV QCM to prevent future occurrences of missed indications. ABFJV QCM has implemented training with ZPMC to improve the quality of inspections. ABFJV will provide documentation showing attendance by ZPMC QC inspectors and the subject of training. Topics to be covered during the instruction are: inspection of equipment prior to use, proper conditions for inspection, proper technique for MT, and UT. In addition, ABFJV has committed to perform overchecks in both the Tower and OBG. This will serve two purposes, first to monitor if the training is effective at reducing the number of missed indications and second to ensure missed indications are prevented.

Documentation supporting successful repair and NDT results of the repair specific to this non conformance (ZPMC-0223) was previously submitted in response to ABF-NPR-000220R00.

Submitted by:

Attachment(s): ABF-NPR-000220R02

Caltrans' comments:

Status: CLO

Date: 15-Oct-2009

The proposed resolution is acceptable. The Department concurs that Non-Conformance ZPMC-0223 is closed.

Submitted by: Lee, Ken

Date: 15-Oct-2009

Attachment(s):

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, PRC**Report No:** NCS-000235**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 05-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0223**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: 24-Apr-2009**Description of Non-Conformance:**

During random verification Magnetic Particle Testing (MT) of weld ESD1-TL7B/L-3A/B, QA discovered one transverse linear indication with a length of approximately 15mm. The weld is located at the skin plates C & D interior corner seam of East Tower, Lift 2. The "Y" location is approximately 52.5 meters.

Contractor's proposal to correct the problem:

Repair affected weld.

Corrective action taken:

The affected weld has been repaired and a NDT report indicating a sound weld 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:**

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

Quality Assurance Inspector

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Reviewed By: Wahbeh,Mazen

QA Reviewer