

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-000495**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0468**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 6CW
Procedural	Procedural	Description: Missed MT indication	

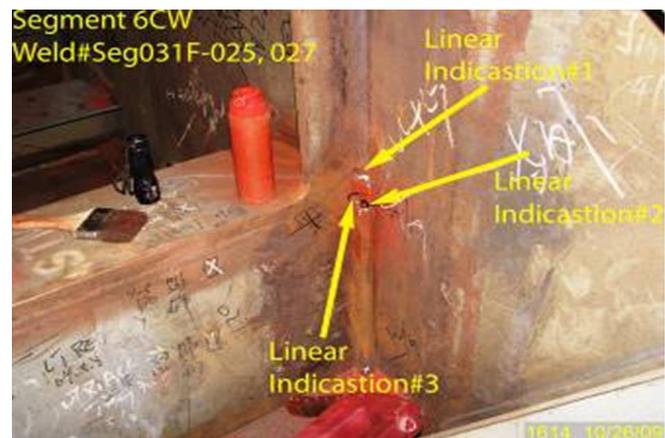
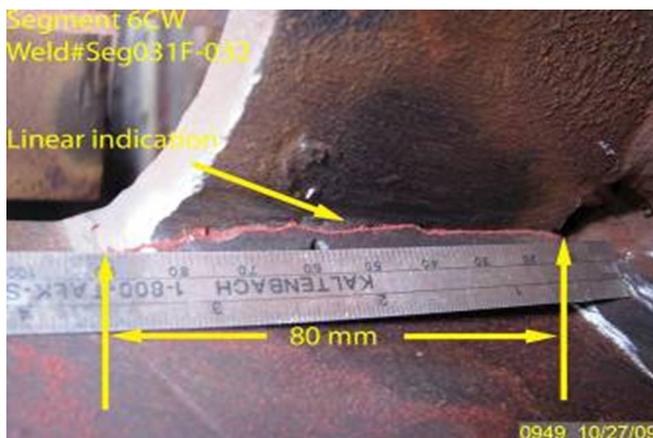
Reference Description: Missed MT indication by QC on various components in Segment 6CW**Description of Non-Conformance:**

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance Inspector discovered a total of five (5) Longitudinal Cracks located inside two (2) cope holes located at segment 6CW. Weld Seg031F-025 had three (3) Longitudinal Cracks with a total length of 18mm and weld Seg031F-027 had two (2) Longitudinal Cracks measuring 15mm and 12 mm in length.

Furthermore, Quality Assurance (QA) Inspector observed a Transverse Crack on the Longitudinal Diaphragm to FL3 Floor Beam weld SEG31F-028.

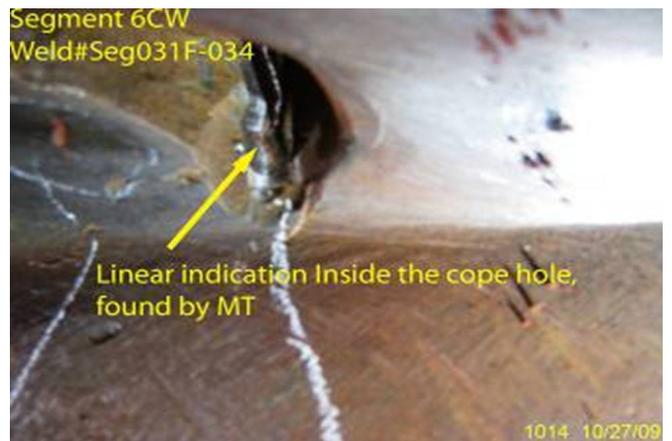
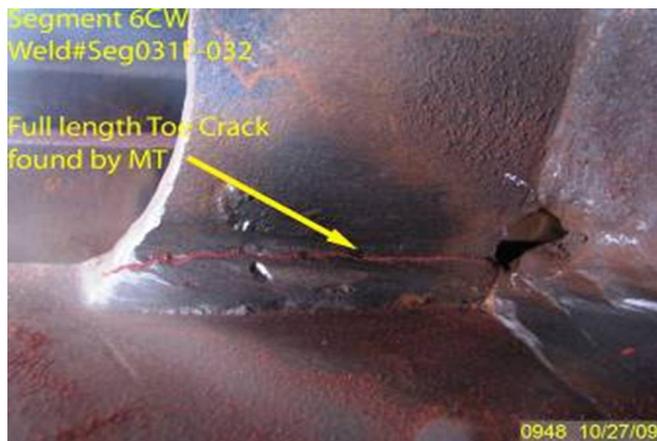
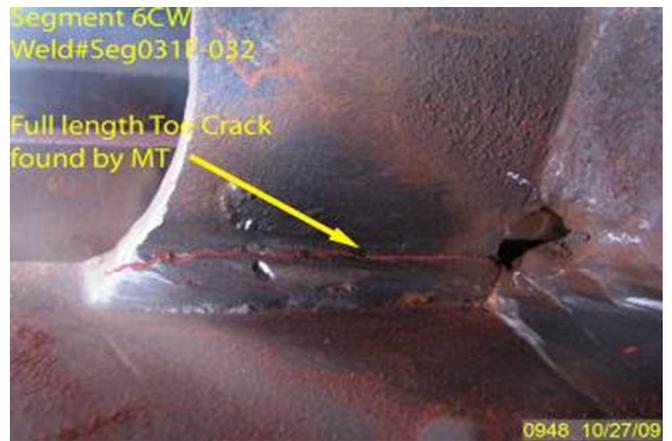
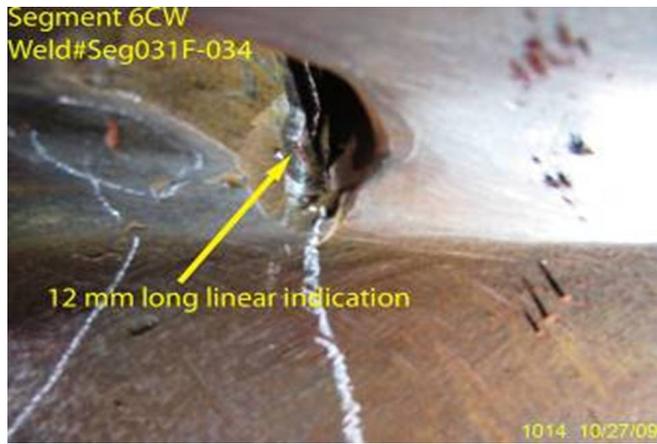
The Caltrans Quality Assurance Inspector also discovered three (3) Linear Cracks identified as one (1) Toe Crack, 80mm in length located at weld Seg031F-032 and two (2) Longitudinal Cracks located inside the cope hole at weld Seg031F-034.

All the welds listed above were previously tested and accepted by ZPMC QC MT.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)



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 (02) Section 6.261.1; “The welds shall have no cracks”.

-AWS D1.5 (02) Section 6.26.2; “Welds that are subject to MT in addition to visual inspection shall have no cracks.

Who discovered the problem: Larry Viars and Hiranch Patel

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1000 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Wang Lu

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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Carreon,Albert	Lead Reviewer/Task Leader
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: 11-Dec-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: 05.03.06-000458

Subject: NCR No. ZPMC-0468

Reference Description: Missed MT indication by QC on various components in Segment 6CW

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:** 06

Remarks:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance Inspector discovered a total of five (5) Longitudinal Cracks located inside two (2) cope holes located at segment 6CW. Weld Seg031F-025 had three (3) Longitudinal Cracks with a total length of 18mm and weld Seg031F-027 had two (2) Longitudinal Cracks measuring 15mm and 12 mm in length.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0468

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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: 05.03.06-000458

Subject: NCR No. ZPMC-0468

Dated: 18-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000492 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher MT training. See attached MT training agenda and attendance roster. The ABF QCM has been discussing missed MT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. Preliminary findings have resulted in ZPMC taking immediate action by performing 100% overchecks of the previously tested areas beginning the week of 18 January 09 as a means of preventing future NCR's for missed indications. ABF has purchased powder dispensers for all the ZPMC MT technicians as a means to help control the amount of powder applied during MT testing. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000492R00;

Caltrans' comments:

Status: AAP

Date: 24-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

Submitted by: Chao, Ching

Attachment(s):

Date: 24-Jan-2010

Tool Box Training Agenda

Subject: MT Techniques

Reason for Training: Several CT NCR's of indications missed during ZPMC NDT inspection.

1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical shock

2. Tools

- a. Lighting
- b. MT Powder. Red for ambient, Yellow for High Temperature.
- c. Powder Bulb
- d. Powder Blower
- e. MT Yoke Adequate working condition
- f. Pie Gage

3. Inspection Techniques

- a. Lighting
- b. Position of body (distance of eyes to the weld surface)
- c. Application of Powder removal of Powder
- d. Continuous method
- e. Two directions
- f. Both sides of weld
- g. Clean and dry surface



教育培训纪录

培训编号: MT-22-Dec-09

培训内容:	MT Techniques
培训对象:	项目质检
授课人员:	Steve Lawton
培训类型:	内部培训
培训时间:	22-Dec-09 5:00 PM
计划培训地点:	ZPMC QC office

人员签到:

姓名	部门	姓名	部门
孙力杰 Sunlei	钢桥	狄坤伦 Di Kunlun	钢桥
孙广强 Sun Guangqiang	钢桥	蔡新鑫 Cai Xinxin	钢桥
徐海 Xu Hai	钢桥	傅春强 Fu Zhongqiang	钢桥
卞源源 Bian Yuanyuan	钢桥	顾云武 Gu Yunwu	钢桥
许兵 Xu Bing	钢桥	金建廷 Jin Jianting	钢桥 MT
李振华 Li Zhenhua	钢桥	常方杰 Chang Fangjie	钢桥
李坤阳 Li Xunyang	QA	袁俊 Yuan Jun	钢桥
王威 Wang Wei	钢桥	刘章敏 Liu Zhangmin	
孙林 Sun Lin	钢桥 MT	徐华祥 Xu Huaxiang	钢桥
丁阿成 Ding A Cheng	钢桥 MT	周东超 Zhou Dongchao	钢桥
贺佳佳 He Jiajia	钢桥	赵成功 Zhao Cheng Gong	钢桥
黄瑞 Huang Rui	钢桥	孙广强 Sun Guangqiang	钢桥
李黎明 Li Liming	钢桥	徐辉 Xu Hui	钢桥
李昌涛 Li Changtao		刘宏斌 Liu Hongbin	

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000458

Subject: NCR No. ZPMC-0468

Dated: 15-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000492 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indication and is providing NDT documents showing that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC has repaired the missed indication and is providing NDT documents showing that the weld is acceptable. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000492R01;

Caltrans' comments:

Status: CLO
Date: 17-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Attachment(s):

Date: 17-Mar-2010



No. B-670

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-15

REGARDING: NCR-000495(ZPMC-0468)

Repair for the MT linear indications has been completed and has been confirmed by CT and has been removed from punchlist. ZPMC has issued B-CWR879 and now providing the NDT records show the repaired welds are acceptable. Based on this ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000495(ZPMC-0468)

B787-MT-15029 R1

A handwritten signature in black ink, appearing to be "J. W.", is located below the attachment list.

3/15/10



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: 11-Dec-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: 05.03.06-000458

Subject: NCR No. ZPMC-0468

Reference Description: Missed MT indication by QC on various components in Segment 6CW

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- Non-Conformance Resolved.

Material Location: OBG

Lift: 06

Remarks:

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance Inspector discovered a total of five (5) Longitudinal Cracks located inside two (2) cope holes located at segment 6CW. Weld Seg031F-025 had three (3) Longitudinal Cracks with a total length of 18mm and weld Seg031F-027 had two (2) Longitudinal Cracks measuring 15mm and 12 mm in length.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0468

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

File: 05.03.06

12.02.15.04
05.03.06-000458,NCT

Received
NCT-000458 11 Dec 09 Page 1 of 1

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection

Contract #: 04-0120F4

Bay Area Branch
 690 Walnut Ave. St. 150
 Vallejo, CA 94592-1133
 (707) 649-5453
 (707) 649-5493

Cty: 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-000495

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 27-Oct-2009

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

NCR #: ZPMC-0468

Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: Segment 6CW
 Procedural Description: Missed MT indication

Reference Description: Missed MT indication by QC on various components in Segment 6CW

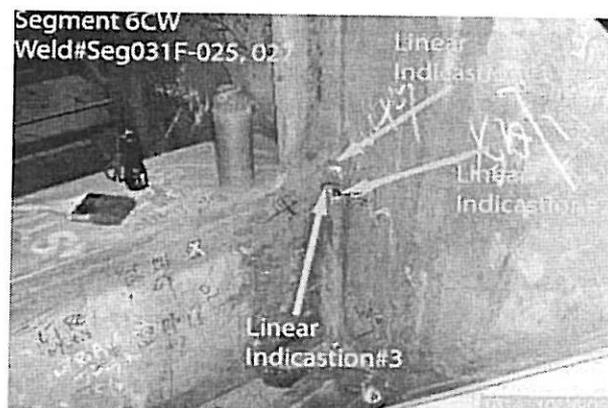
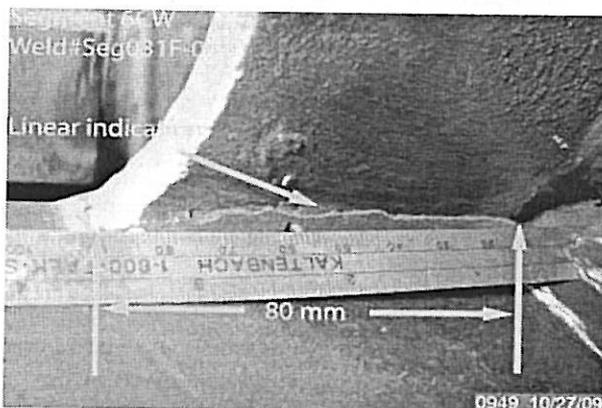
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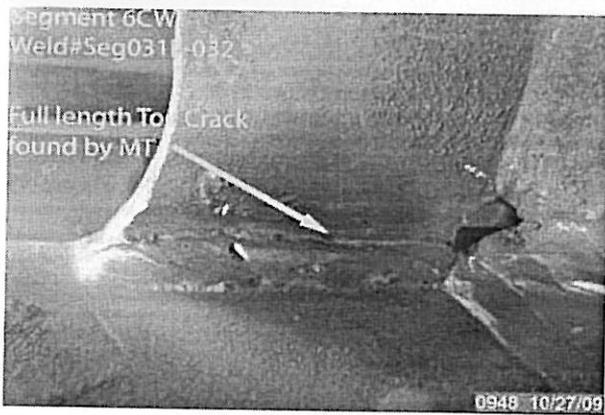
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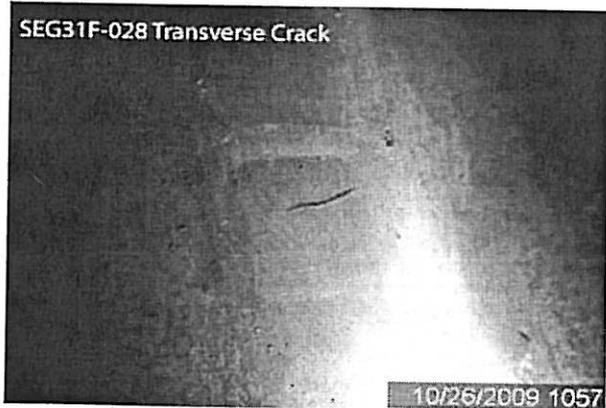
QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 3 of 3)



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Who discovered the problem: Larry Viars and Hiranch Patel
Name of individual from Contractor notified: Peter Shaw
Time and method of notification: 1000 hours, Verbal
Name of Caltrans Engineer notified: Ching Chao and Bill Howe
Time and method of notification: 1100 hours, Verbal
QC Inspector's Name: Wang Lu
Was QC Inspector aware of the problem: Yes No
Contractor's proposal to correct the problem:
N/A

Comments:

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Inspected By: Carreon, Albert
Reviewed By: Wahbeh, Mazen

Lead Reviewer/Task Leader
SMR



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-15029R1 DATE日期 2010.03.12 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: SEG031F 6CW longitudinal diaphragm 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: 5395 5617 5620

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-345 14/20mm

WELDING PROCESS 焊接方法: 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			
SEG031F-028	1R1			ACC.		100%MT
SEG031F-025	1R1			ACC.		100%MT
SEG031F-027	1R1			ACC.		100%MT
SEG031F-032	1R1			ACC.		100%MT
SEG031F-034	1R1			ACC.		100%MT
SEG031F-048	1R1			ACC.		100%MT

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EXAMINED BY 主探 Fu Zhiqiang <i>Fu Zhiqiang</i> 10.3.10	REVIEWED BY 审核 <i>[Signature]</i> 10.3.10
LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM	LEVEL-II SIGN / DATE日期 用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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(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-000570**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 29-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0468**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: 27-Oct-2009**Description of Non-Conformance:**

During a random Magnetic Particle (MT) verification at segment 6CW, Caltrans Quality Assurance Inspector discovered a total of five (5) Longitudinal Cracks located inside two (2) cope holes located at segment 6CW. Weld Seg031F-025 had three (3) Longitudinal Cracks with a total length of 18mm and weld Seg031F-027 had two (2) Longitudinal Cracks measuring 15mm and 12 mm in length.

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All the welds listed above were previously tested and accepted by ZPMC QC MT.

Contractor's proposal to correct the problem:

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

Corrective action taken:

Contractor submitted NDT records verifying the welds are now in conformance with Contract requirements.

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 Jim Simonis 152. 1675.3703, who represents the Office of Structural Materials for your project.

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer