

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, P.R. China

Report No: NCR-000333

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Jun-2009

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

NCR #: ZPMC-0307

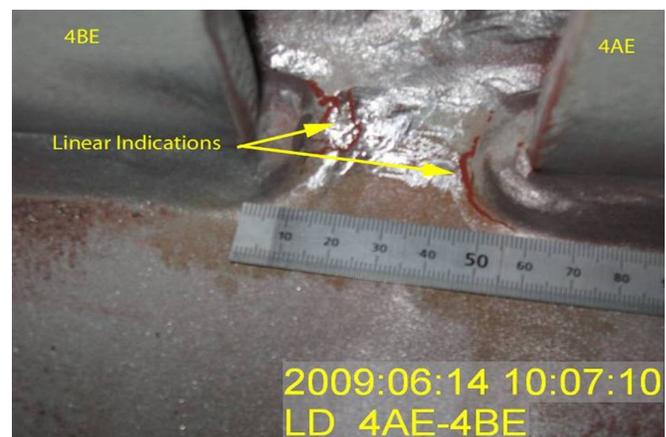
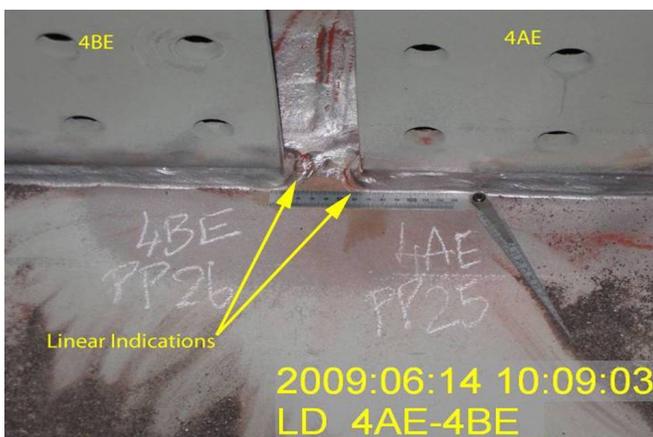
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment Splice 4AE/4BE
Procedural	Procedural	Description:	

Reference Description: Missed MT Indications After Heat Straightening Longitudinal Diaphragms, Segment Splice 4AE/4BE

Description of Non-Conformance:

During random verification magnetic particle testing (MT) of longitudinal diaphragm welds SEG020B-008 and SEG018C-026 (4AE/4BE segment splice, bike path side), Caltrans Quality Assurance (QA) Inspector observed two linear indications measuring 20mm and 30mm in length respectively. These welds were earlier subjected to multiple heat straightening cycles to correct alignment and distortion. One hundred percent (100%) of the affected welds were MT tested and accepted by ZPMC Quality Control (QC) technicians after heat straightening. ZPMC provided Caltrans a notification to perform QA inspections for these welds on June 13, 2009 which indicated ZPMC's acceptance of the associated welds.



Applicable reference:

WQCP Section 11.2.5.1: "Final NDT shall be performed after heat straightening."

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

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: M. Manikandan
Name of individual from Contractor notified: Kevin Chen
Time and method of notification: 1000 hours, 06/14/09, Verbal
Name of Caltrans Engineer notified: Stanley Ku
Time and method of notification: 800 hours, 06/16/09, Verbal
QC Inspector's Name: Wang Lu
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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
Reviewed By:	Wahbeh, Mazen	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: 22-Jun-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: 05.03.06-000297

Subject: NCR No. ZPMC-0307

Reference Description: Missed MT Indications After Heat Straightening Longitudinal Diaphragms, Segment Splice 4AE/4BE

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:** 04

Remarks:

During random verification magnetic particle testing (MT) of longitudinal diaphragm welds SEG020B-008 and SEG018C-026 (4AE/4BE segment splice, bike path side), Caltrans Quality Assurance (QA) Inspector observed two linear indications measuring 20mm and 30mm in length respectively. These welds were earlier subjected to multiple heat straightening cycles to correct alignment and distortion. One hundred percent (100%) of the affected welds were MT tested and accepted by ZPMC Quality Control (QC) technicians after heat straightening. ZPMC provided Caltrans a notification to perform QA inspections for these welds on June 13, 2009 which indicated ZMPC's acceptance of the associated welds.

See attached NCR No. ZPMC-307 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified recurring non-conformance which constitutes a systematic problem on both materials/workmanship and quality control issues to remedy the defected work and with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Ching Chao

Attachments: ZPMC-0307

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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: 05.03.06-000297

Subject: NCR No. ZPMC-0307

Dated: 27-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000272 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

ZPMC has responded to this NCR and has attached documents as evidence of completion. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000272R00;

Caltrans' comments:

Status: REJ

Date: 21-Aug-2009

The proposed resolution is not acceptable. The heat straightening report and MT reports were submitted. However, repairs must be performed in the areas where defects were documented in the Non-Conformance report.

Please submit the Critical Weld Repair report and the follow-up Non-Destructive Testing reports showing that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0307 at that time.

Submitted by: Wright, Doug

Date: 21-Aug-2009

Attachment(s):



No. B-405

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-20

REGARDING: NCR-000333 (ZPMC-0307)

With this letter of response, ZPMC requests closure for Caltrans NCR-000333 (ZPMC-0307). We agree what describe in the non-conformance report, and then re-inspected for the heat straight weld areas, with the support of the closed heat straight record and MT completed report, we apply to close the NCR.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report NCR-000333 (ZPMC-0307).

Please reference attached documentation for acceptance and closure the NCR-000333 (ZPMC-0307).

ATTACHMENT:

NCR-000333 (ZPMC-0307)

The HSR 6891 and 7116

The final MT report

Zhao Shuangbao

2009. 7. 20



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B
 项目名称: 美国加州海湾大桥

NCR Number:
 NCR 编号: NCR-B-202
 (NCR-000333)

Item: Missed MT Indications
 名称描述: MT 漏检

Item Number:
 件号: N/A

Drawing:
 图号: 4AE/4BE

Location: OBG Trial Assembly Yard
 位置: OBG 总拼外场

Date:
 日期: 2009-06-30

Description of Nonconformance:

不符合项状态描述:

During random verification MT of longitudinal diaphragm welds SEG020B-008 and SEG018C-026(4AE/4BE segment splice, bike path side), Caltrans inspector observed two linear indications measuring 20mm and 30mm in length respectively. These welds were earlier subjected to multiple heat straightening cycles to correct alignment and distortion. One hundred percent of the affected welds were MT tested and accepted by ZPMC QC after heat straightening.

在对纵桁焊缝 SEG020B-008 和 SEG018C-026 (4AE/4BE 自行车道侧) 随机 MT 检查中, 加州检验员发现二条长度分别为 20mm 和 30mm 的缺陷。这些焊缝进行了校火。校火区域焊缝 ZPMC 人员进行了 100% 的 MT 检查并接受合格。

参考标准: AWS D1.5 章节 6.26.2 “除目检之外进行 RT 和 MT 检测的焊缝严禁有裂纹”

Work By: [Signature]
 施工方: [Signature]

Prepared by: [Signature]
 准备: [Signature] 6/30/09

Reviewed by QCE: [Signature]
 质量工程师批准: [Signature]

- Drawing Error 图纸错误
 Material Defect 材料缺陷
 Fabrication Error 制作错误
 Other 其他原因 6.30

- Disposition: Use as is 回用
 Repair 返修
 Reject 拒收

Recommendation:

建议: 加强现场管理, 提高检测能力. Enhance supervision management to improve inspection ability.

Prepared by: [Signature]
 准备: [Signature] 07.18

Approved by QCA: _____
 质量经理批准

Reason for Nonconformance:

不符合原因: 校火后 MT 漏检, 产生缺陷, 导致线性缺陷发现。
 Did not perform MT after heat straightening caused linear indication discovered.

预防措施: 加强现场管理. Enhance supervision on-site.
 Approved by/批准: [Signature] 07.18

Technical Justification for Use-As-Is/Repair: Attachment Non-attachment

回用或返修的技术依据:

附件 无附件

Reviewed /批准: _____

Verification: Acceptable 可接受 Unacceptable 不可接受

确认:

Verified by QCI/质检确认: _____ Reviewed by QCA/质检主任审核: _____

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: 22-Jun-2009

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

Job Name: SAS Superstructure

Document No: 05.03.06-000297

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0307

Reference Description: Missed MT Indications After Heat Straightening Longitudinal Diaphragms, Segment Splice 4AE/4BE

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

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- Non-Conformance Resolved.

Material Location: OBG

Lift: 04

Remarks:

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Transmitted by: Ching Chao

Attachments: ZPMC-0307

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

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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, P.R. China

Report No: NCR-000333

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Jun-2009

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

NCR #: ZPMC-0307

Type of problem:

- | | | | | | |
|--------------|--------------------------|------------|--------------------------|--------------|-------------------------------------|
| Welding | <input type="checkbox"/> | Concrete | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> |
| Welding | <input type="checkbox"/> | Curing | <input type="checkbox"/> | Procedural | <input checked="" type="checkbox"/> |
| Joint fit-up | <input type="checkbox"/> | Coating | <input type="checkbox"/> | Other | <input type="checkbox"/> |
| Procedural | <input type="checkbox"/> | Procedural | <input type="checkbox"/> | Description: | |

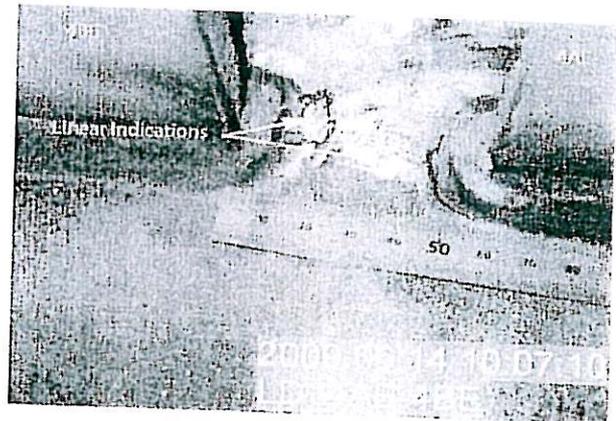
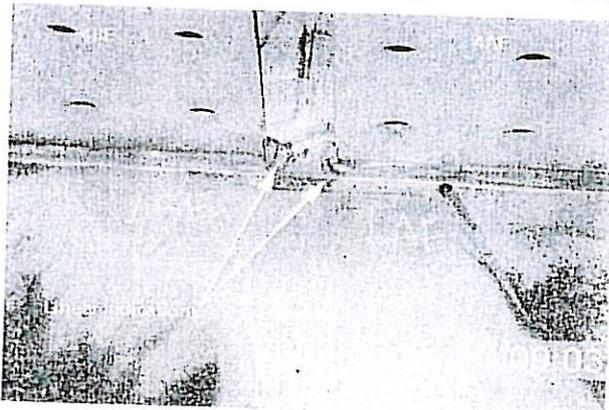
Bridge No: 34-0006

Component: OBG Segment Splice 4AE/4BE

Reference Description: Missed MT Indications After Heat Straightening Longitudinal Diaphragms, Segment Splice 4AE/4BE

Description of Non-Conformance:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Who discovered the problem: M. Manikandan
Name of individual from Contractor notified: Kevin Chen
Time and method of notification: 1000 hours, 06/14/09, Verbal
Name of Caltrans Engineer notified: Stanley Ku
Time and method of notification: 800 hours, 06/16/09, Verbal
QC Inspector's Name: Wang Lu
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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
Reviewed By:	Wahbeh, Mazen	SMR

VT-32552, 32553, UT-7588



火工校正记录

Heat Straightening Record(HSR)

报告号 Record#

HSR1(B)-6891

版本号 Revision #

0

日期 Date

2009.06.19

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-0120F4

工程编号 JOB#: ZP06-787

装配 Assembly:

质检代表/Quality Control Representative

部装 Sub-Assembly:

Xing m 2009-06-19

梁段 Gird: 4AE SP78A+BP16A

质检经理/Quality Assurance Manager-Approval

塔段 Tower: N/A

Lujianhua

焊缝号 Weld No: N/A

焊缝地图号 Weld Map No: SEG018A-008, SEG018C-026

情况描述 Description of Condition

Cause原因 Welding distortion 焊接变形

Type of Defect缺陷类型 Welding distortion 焊接变形

Inspection Method检查方法 Visual 目检

处置方法 Disposition

缺陷去除方法(Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

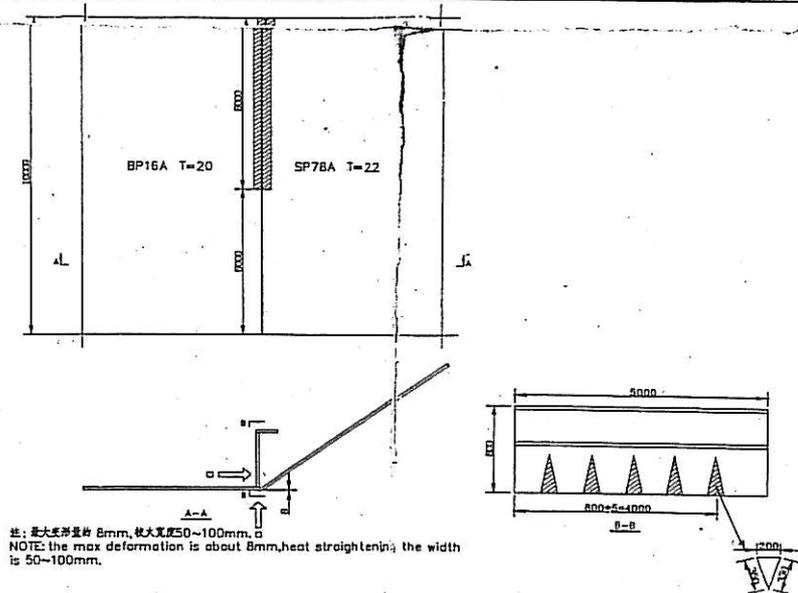
后续NDE(Post-Removal NDE): After finishing heat straightening, the weld of the heat area shall perform NDT according to the approved shop drawing 校火后, 根据图纸要求对热影响区域进行 NDT 检测。

纠正措施(Corrective Action(s)): Control current, voltage and weld speed according to relevant WPS. If necessary anti-deformation or hold down device can be added. 依据相应的WPS的要求控制电流, 电压和焊接速度。如有必要, 可使用反变形设施进行校正。

实施次数(Number of application): 1~3

最高温度(Maximum temperature): <650°C

简图 Sketch



To be signed when Closing HSR~Verify compliance and all necessary reports are ready to attach

检验员 Inspector:	Luanzhongqiang	签字 Signature:	李兆刚
CWI #	07120761	Closing Date:	09.07.12
II 级探伤 NDE Certification:	Level II	质检经理 QC Manager:	Luanzhongqiang
审核日期 Review Date:	2009.07.12		

Note: All repair work shall be performed in accordance with applicable CALTRANS approved procedures, contract specifications and AWS D1.5 2002.

#R787-QCP-1101

Approved by Lujianhua 6/19/09



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12195		DATE日期 2009.07.12	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: OBE4 SEG020C OBG LONGITUDINAL		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. 28 ST , 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	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345T2-X A709M-345F2-X 14/20 mm	
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			
SEG020B-007				ACC.		100%MT
SEG020B-008				ACC.		100%MT
SEG020C-016				ACC.		100%MT
SEG020C-033				ACC.		100%MT
SEG020C-034				ACC.		100%MT
SEG020C-036				ACC.		100%MT
SEG020C-037				ACC.		100%MT
SEG020C-032				ACC.		100%MT

AFTER HSR1 (B) - 7116

BLANK

EXAMINED BY 主探 Li Zhenhua <i>Li zhenhua</i> 9.07.12	REVIEWED BY 审核 <i>Xu Hai</i> 09.07.12
LEVEL - II SIGN 签名 / DATE 日期	LEVEL-II SIGN / DATE 日期
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12194 DATE日期 2009.07.05 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: OBE4 OBG LONGITUDINAL		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. 28 ST , 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	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345 14/20/30 mm
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			
SEG018C-025				ACC.		100%MT
SEG018C-026				ACC.		100%MT
SEG018C-020				ACC.		100%MT
SEG018C-021				ACC.		100%MT
SEG018C-023				ACC.		100%MT
SEG018C-024				ACC.		100%MT

AFTER HSR1 (B) - 6891

BLANK

EXAMINED BY主探 Jin Jianting <i>Lizhen huang</i> LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM	REVIEWED BY 审核 <i>Xu Kai 09.07.12</i> LEVEL-II SIGN / DATE日期 用户CUSTOMER
签字 SIGN / 日期 DATE	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: 05.03.06-000297

Subject: NCR No. ZPMC-0307

Dated: 18-Sep-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000272 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has now attached all documents relative to inspections performed for specific welds documented in the CT NCR. ZPMC requests closure of this NCR.

ZPMC has now attached all documents relative to inspections performed for specific welds documented in the CT NCR. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000272R01;

Caltrans' comments:

Status: CLO

Date: 24-Sep-2009

Contractor has submitted all required documentation

Submitted by: Chao, Ching

Date: 24-Sep-2009

Attachment(s):



No. B-473

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-9-14

REGARDING: NCR-000325/333 (ZPMC-0299/307)

With this letter of response, ZPMC requests closure for Caltrans NCR-000325/333 (ZPMC-0299/307). Per the comments of the NPR we are providing the weld repair report that the repair has been performed and the final condition has been accepted too.

so base on the above explanation, ZPMC applies to close the caltrans's report NCR-000325/333 (ZPMC-0299/307).

Please reference attached document for acceptance and closure the NCR-000325/333 (ZPMC-0299/307).

ATTACHMENT:

NCR-000325/333 (ZPMC-0299/307)

The weld repair reports

The acceptable MT reports

Zhao Shuangbo

2009.9.14



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG020B/SEG018C	报告编号 Report No.	B-WR7354
合同号 Contract No.:	04-0120F4	部件名称 Items Name	4E PLATE PANEL SPLICE	NDT报告编号 Report No.of NDT	B787-MT-13624
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

One line indication was found by use of MT on weld SEG020B-008. L=20 Y=0

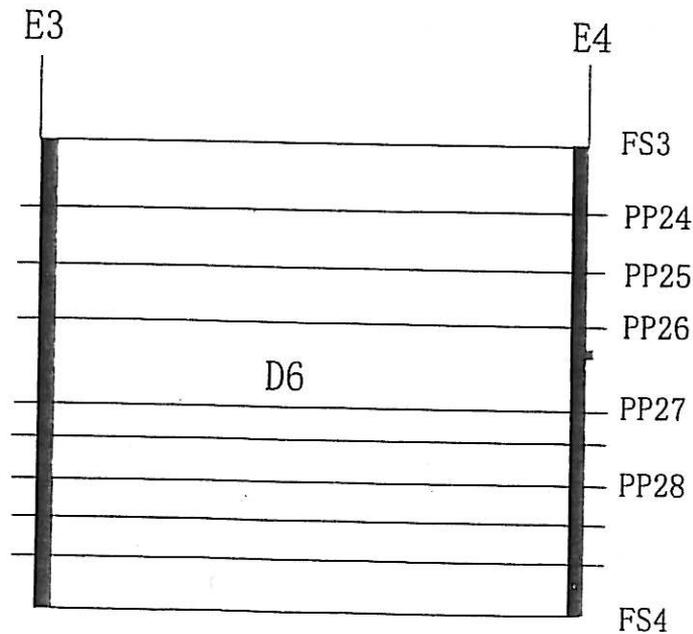
One line indication was found by use of MT on weld SEG018C-026. L=30 Y=0

Sun Gongchang

 检验员 (Inspector): Sun Gongchang 日期(Date): 09.07.06

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

1. 焊道未及时处理干净。
1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Lizhi gang* 日期(Date): *09.07.12*

处理意见

Disposition :

1. 按照焊接返修工艺规程 (WPS) 打磨缺陷区域;
 2. 按照返修WPS准备焊接破口;
 3. 返修前对进行返修的区域作100%MT检查, 确保缺陷全部去除;
 4. 根据批准的焊接返修工艺规程 (WPS) 进行预热及焊接;
 5. 将焊接区域打磨至与周围母材平齐;
 6. 对修补区域进行VT与MT检测;
-
1. Remove all the defects according to the approved repair WPS by means of grinding.
 2. Prepare a groove based on the repair WPS.
 3. Verify with MT and VT no defects remain in the repair area prior to welding;
 4. Preheat and weld according to the relevant WPS.
 5. Grind the weld flush with adjacent base metal after welding.
 6. Perform VT and MT inspection to the repaired area.

工艺: *Hexiaolin*
Technical engineer *09.07.12*

审核:
Approved by

(Signature)

日期
Date *9.12*



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG020B/SEG018C	报告编号 Report No.	B-WR7354
合同号 Contract No.:	04-0120F4	部件名称 Items Name	4E PLATE PANEL SPLICE	NDT报告编号 Report No.of NDT	B787-MT-13624
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。

1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): *Li Zhigang* 日期(Date): *09. 7. 12*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1 WPS-345-SMAW-2 G(2F)-FCM-Repair WPS-345-FCAW-2 G(2F)-FCM-Repair	工艺员 technologist	<i>Hexian Lin</i> <i>09.09.12</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>line indication</i>
焊前处理检查 Inspection before welding	<i>acc</i>	焊前预热温度 Preheat temperature before welding	<i>118°C</i>
最大碳刨深度 Max. depth of gouging	<i>NA</i>	碳刨总长 Total length of gouging	<i>NA</i>
焊工 welder <i>048659</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position <i>2F</i>	
焊接电流 Current <i>162</i>	焊接电压 Voltage <i>13</i>	焊接速度 Speed <i>112</i>	

返修后检查

Inspection After repairing:

外观检查 VT result <i>acc</i>	检验员 Inspector <i>Gu rong jian</i>	日期 Date <i>09. 7. 12</i>
NDT复检 NDT result <i>acc</i>	探伤员 NDT person <i>W. J. Chen</i>	日期 Date <i>09. 07. 12</i>

见证:

Witness/Review:

备注:

Remark:



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-13624 DATE日期 2009.07.06 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: SEG020B/018C CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4
 OBG 4E PLATE PANEL SPLICE

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 Material & thickness 母材, 厚度: A709M-345T2
 CASTING 铸件 20/14 mm
 FORGING 锻造

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			
SEG020B-008	1	line indication	20		REJ.	Y=0
SEG018C-026	1	line indication	30		REJ.	Y=0
BLANK						

EXAMINED BY 主探: Sun gong chang *Sun Gongchang* REVIEWED BY 审核: Su wei *Su wei*
 LEVEL-II SIGN 签名 / DATE 日期: 9-27-06 LEVEL-II SIGN 签名 / DATE 日期: 9-26-09
 质量经理 / QCM: *(signature)* 用户 CUSTOMER: _____
 签字 SIGN / 日期 DATE: 7.6 签字 SIGN / 日期 DATE: _____



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-13624R1-1 DATE日期 2009.07.12 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: SEG020B/018C CALTRANS CONTRACT NO.: 加州工程编号: 04-0120F4
 OBG 4E PLATE PANEL SPLICE

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 Material & thickness 母材, 厚度: A709M-345T2
 CASTING 铸件 20/14 mm
 FORGING 锻造

WELDING PROCESS 焊接方法: SMAW 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			
SEG020B-008	1R1			ACC.		100%MT
SEG018C-026	1R1			ACC.		100%MT

AFTER B-WR7354

BLANK

EXAMINED BY 主探: Li zhen hua Li zhen hua REVIEWED BY 审核: Xu Hai
 LEVEL-II SIGN 签名 / DATE 日期: 9.07.12 LEVEL-II SIGN 签名 / DATE 日期: 9.07.12
 质量经理 / QCM: Li zhen hua 用户 CUSTOMER: _____
 签字 SIGN / 日期 DATE: 7.12 签字 SIGN / 日期 DATE: _____



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	DP9	报告编号 Report No.	B-WR7353
合同号 Contract No.:	04-0120F4	部件名称 Items Name	DECK PLATE	NDT报告编号 Report No.of NDT	B787-MT-11870
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

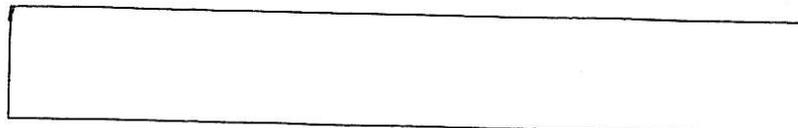
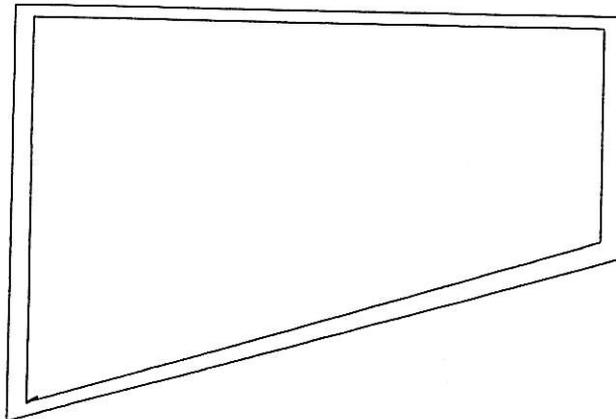
Description of welding discontinuity:

We found one line indication in material after removed tack welding PL1A. L=10 Y=0

检验员 (Inspector): Sun gong chang 日期(Date): 09.06.20

焊缝返修位置示意图:

Draft of welding discontinuity:



产生原因:

Caused:

- 1、焊道未及时处理干净。
1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Li Haifei* 日期(Date): *07.08.22*

处理意见

Disposition :

1. 按照焊接返修工艺规程 (WPS) 打磨缺陷区域;
 2. 按照返修WPS准备焊接破口;
 3. 返修前对进行返修的区域作100%MT检查, 确保缺陷全部去除;
 4. 根据批准的焊接返修工艺规程 (WPS) 进行预热及焊接;
 5. 将焊接区域打磨至与周围母材平齐;
 6. 对修补区域进行VT与MT检测;
1. Remove all the defects according to the approved repair WPS by means of grinding.
 2. Prepare a groove based on the repair WPS.
 3. Verify with MT and VT no defects remain in the repair area prior to welding;
 4. Preheat and weld according to the relevant WPS.
 5. Grind the weld flush with adjacent base metal after welding.
 6. Perform VT and MT inspection to the repaired area.

工艺: *Hexiao Lin*
Technical engineer

07.08.22

审核:
Approved by

Lu Jiantan 日期
Date

7.12



焊缝返修报告

Welding Repair Report

版本 Rev. No.

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	DP9	报告编号 Report No.	B-WR7353
合同号 Contract No.:	04-0120F4	部件名称 Items Name	DECK PLATE	NDT报告编号 Report No.of NDT	B787-MT-11870
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。

1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): *Lidaifei* 日期(Date): *09.06.22*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-1 G(1F)-Repair WPS-345-FCAW-1 G(1F)-Repair-1	工艺员 technologist	<i>flexiactin 09.09.12</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>Line indication</i>
焊前处理检查 Inspection before welding	<i>acc</i>	焊前预热温度 Preheat temperature before welding	<i>136°C</i>
最大碳刨深度 Max. depth of gouging	<i>NA</i>	碳刨总长 Total length of gouging	<i>NA</i>
焊工 welder <i>04861</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position	<i>1G</i>
焊接电流 Current <i>158</i>	焊接电压 Voltage <i>22</i>	焊接速度 Speed	<i>108</i>

返修后检查

Inspection After repairing:

外观检查 VT result <i>acc</i>	检验员 Inspector <i>Guorong Jiao</i>	日期 Date <i>09.06.22</i>
NDT复检 NDT result <i>acc</i>	探伤员 NDT person <i>Changfangjie</i>	日期 Date <i>09.06.22</i>

见证:

Witness/Review:

备注:

Remark:

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-000369**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 02-Nov-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0307**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: 14-Jun-2009**Description of Non-Conformance:**

During random verification magnetic particle testing (MT) of longitudinal diaphragm welds SEG020B-008 and SEG018C-026 (4AE/4BE segment splice, bike path side), Caltrans Quality Assurance (QA) Inspector observed two linear indications measuring 20mm and 30mm in length respectively. These welds were earlier subjected to multiple heat straightening cycles to correct alignment and distortion. One hundred percent (100%) of the affected welds were MT tested and accepted by ZPMC Quality Control (QC) technicians after heat straightening. ZPMC provided Caltrans a notification to perform QA inspections for these welds on June 13, 2009 which indicated ZMPC's acceptance of the associated welds.

Contractor's proposal to correct the problem:

Repair area in question and perform the required NDT.

Corrective action taken:

Contractor submitted Welding Repair Report (WRR 7354) along with required MT report verifying repair is 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: 1347 246 3441, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer