

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-000385**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0359**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower
Procedural	Procedural	Description: West Tower, Lift 1, Fit Lug welds	

Reference Description: Missed MT Indications on West Tower, Lift 1, 28m Fit Lug welds**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) of weld joints WSD1-A115-D/J-14, 73, 60, 165, 198, 222 and 224 at West Tower, 28m Diaphragm Fit Lugs, QA discovered seven (7) rejectable linear indications measuring approximately 8 to 26 mm in length. These welds were previously tested and accepted by ZPMC QC MT technicians.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Don Walton

Time and method of notification: 8-25-09, 16:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 8-27-09; 10:00; Verbal

QC Inspector's Name: Xu Bing

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-Aug-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: 05.03.06-000348

Subject: NCR No. ZPMC-0359

Reference Description: Missed Indications (MT) / West Shaft Lift 1 / Fit Lug Welds

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 weld joints WSD1-A115-D/J-14, 73, 60, 165, 198, 222 and 224 at West Tower, 28m Diaphragm Fit Lugs, QA discovered seven (7) rejectable linear indications measuring approximately 8 to 26 mm in length. These welds were 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 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the deficiencies have been brought into compliance with the contract requirements. Additionally address the probable causes for the indications and any actions that will be taken to limit future occurrences.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the failure of Quality Control to identify the linear indications during magnetic particle testing of the welds. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Recent failure by Quality Control to identify indications (MT) have resulted in the issuance of NCR ZPMC-0358 related to Tower.

Transmitted by: Scott Kennedy Sr. Bridge Engineer
Attachments: ZPMC-0359

NCT

(*Continued Page 2 of 2*)

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000348

Subject: NCR No. ZPMC-0359

Dated: 03-Sep-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000354 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has notified ZPMC of the missed MT indications and ZPMC will submit a CWR to complete the necessary repairs.

ABF has notified ZPMC of the missed MT indications and ZPMC will submit a CWR to complete the necessary repairs. ABF has taken action by hiring several MT technicians to perform overchecks of several types of welds due to the amount of missed indications. ABF is also conducting an investigation of why ZPMC is experiencing cracking of welds. This investigation is being performed by both onsite ABF personnel as well as welding experts hired by ABF for this purpose. Recently CT has brought in their own welding consultant to discuss ABF findings and preventive actions. Preventive actions such as increased preheats have been discussed with ZPMC. When the investigation is completed, ABF will submit the findings to ZPMC and CT. ZPMC will submit the repair documents at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000354R00

Caltrans' comments:

Status: REJ

Date: 03-Sep-2009

The Department will consider closure of this NCR once the repair documents are submitted, reviewed and found to be acceptable.

Submitted by: Lee, Ken

Date: 03-Sep-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000348

Subject: NCR No. ZPMC-0359

Dated: 30-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000354 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: Attached is documentation of the repair of the missed indications, subsequent NDT also attached are the approved CWRs for the indications that were cracks.

Attached is documentation of the repair of the missed indications, subsequent NDT also attached are the approved CWRs for the indications that were cracks. The NDT documentation shows that the weld is acceptable. ABFJV's QCM has conducted training with ZPMC's MT inspectors and has previously submitted the training agenda and sign in sheet to the Department for verification to show the steps ABFJV is taking to address the missed indications. In addition, ABFJV has implemented NDT verification of welds to ensure that welds are acceptable prior to being inspected by the Engineer. Based on these actions and the attached documentation, ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000354R01;

Caltrans' comments:

Status: CLO

Date: 04-Dec-2009

The proposed resolution is acceptable. The Non-conformance ZPMC-0359 is closed.

Submitted by: Lee, Ken

Date: 04-Dec-2009

Attachment(s):



No. T-094

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-11-26

REGARDING: NCR-000385 (ZPMC-0359)

ZPMC received NCR-000385 (ZPMC-0359), ZPMC acknowledged this problem. And we have issued relative reports to do the repair work.

We have issued the CWR about the weld joints WSD1-A115D/J-14,73,198,224.

The welds joints WSD1-A115D/J-60,165,222 our grinder just grind to remove the surface linear indications without welding repair work.

When we finished the repair work we gave the notification to the CT people again to confirm the rejectable welds no problem. And the CT people did the inspection again about the problem welds, and at last accepted all the welds and green tag on the welds.

So ZPMC want CT close this NCR.

ATTACHMENT:

NCR-000385 (ZPMC-0359)

REPORT OF MAGNETIC PARTICLE EXAMINATION:

T787-MT-7042;T787-MT-6015;T787-MT-5974R1,T787-MT-5975R1;T787-MT-5975

CWR:T-CWR278,T-CWR279,T-CWR280,T-CWR281

NOTIFICATION:004073

L. Xingjun

09.11.26

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-Aug-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: 05.03.06-000348
Subject: NCR No. ZPMC-0359
Reference Description: Missed Indications (MT) / West Shaft Lift 1 / Fit Lug Welds

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

Remarks:

During Magnetic Particle Testing (MT) of weld joints WSD1-A115-D/J-14, 73, 60, 165, 198, 222 and 224 at West Tower, 28m Diaphragm Fit Lugs, QA discovered seven (7) rejectable linear indications measuring approximately 8 to 26 mm in length. These welds were 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 (02) Section 6.26.2 – "Welds that are subject to MT in addition to visual inspection shall have no cracks."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance including documentation that the deficiencies have been brought into compliance with the contract requirements. Additionally address the probable causes for the indications and any actions that will be taken to limit future occurrences.

In addition to the material/workmanship non-conformance, propose a resolution that addresses the failure of Quality Control to identify the linear indications during magnetic particle testing of the welds. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Recent failure by Quality Control to identify indications (MT) have resulted in the issuance of NCR ZPMC-0358 related to Tower.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0359

02.02.15.04

05.03.06-000348.NCT

Received
NCT-000348 28 Aug 09

NCT

(Continued Page 2 of 2)

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

File: 05.03.06

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-000385

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 27-Aug-2009

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

NCR #: ZPMC-0359

Type of problem:

Welding **Concrete** **Other**

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

Joint fit-up **Coating** **Other** **Component:** West Tower

Procedural **Procedural** **Description:** West Tower, Lift 1, Fit Lug welds

Reference Description: Missed MT Indications on West Tower, Lift 1, 28m Fit Lug welds

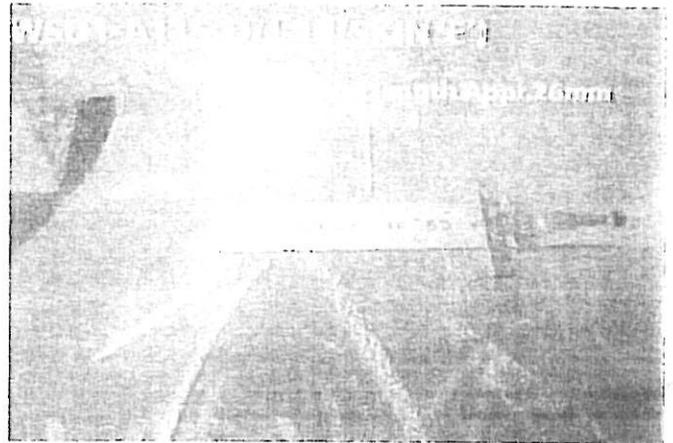
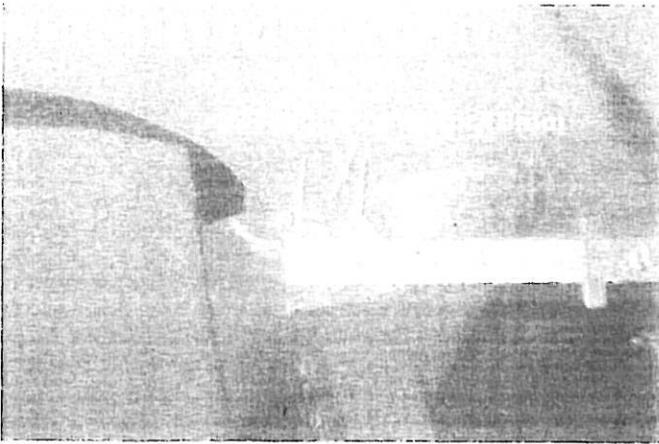
Description of Non-Conformance:

During Magnetic Particle Testing (MT) of weld joints WSD1-A115-D/J-14, 73, 60, 165, 198, 222 and 224 at West Tower, 28m Diaphragm Fit Lugs, QA discovered seven (7) rejectable linear indications measuring approximately 8 to 26 mm in length. These welds were previously tested and accepted by ZPMC QC MT technicians.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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

Who discovered the problem: Subhasis Bera

Name of individual from Contractor notified: Don Walton

Time and method of notification: 8-25-09, 16:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 8-27-09; 10:00; Verbal

QC Inspector's Name: Xu Bing

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



Shift		序号 No	检验内容 Inspection	NDT客户检验通知单 NDT Inspection Notification Sheet		申请递交时间: Submit time: 2009-8-27 7:54	文件编号:004073 Document No.
day shift				待检验构件 Inspection part	产品分类 Section	检验场地 Inspection Place	计划检验时间 Inspection Time
		1	FINAL MT FOR WELDS	WSD1-A115D/J-198, 222, 224, 165, 73, 60, 14	WEST TOWER LITT 1	OUTSIDE MILLING POSITION	2009-8-27 8:20 FOR GREEN TAG AFTER REPAIR
		2	FINAL MT FOR WELDS	WSD1-A115C/J-146	WEST TOWER LITT 1	OUTSIDE MILLING POSITION	2009-8-27 8:20 FOR GREEN TAG AFTER REPAIR
		3					
		4					

备注:
Note:

- 1、见证通知发出后，现场等待时间通常不超过30分钟；如有变动，现场通知。
- 1、When ZPMC give this table to Caltrans, Zpmc will do the inspection in 30 minutes. If we change the plan, we will inform Caltrans in the shop.
- 2、ZPMC根据自己的检验控制点 (HOLD POINT) 进行日常检验。
- 2、ZPMC will do any inspection according to the HOLD POINT.
- 3、此单为临时试用单，仅适用于完工焊缝的NDT检验见证通知。
- 3、This table is a temporary one, just for final NDT inspection notification.
- 4、QC检验完成后，QA是否需要复验，由QA自行决定，QC不再另行通知。复验等待时间通常为24小时。
- 4、When ZPMC QC finish NDT inspection, Caltrans QA can decide if they want to retest
- 5、具体焊缝编号请看附页。
- 5、The weld ID is on the attachment.

联系人:
Requested By:

CT签收人:
CT Receiver:

签收时间:
Time:



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR278
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5974
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

在对WSD1-A115D/J-14检测时, 发现1处纵向裂纹, L=26mm Y=30mm

Welder ID No. (焊工编号): 066443 Position:(位置): 3F

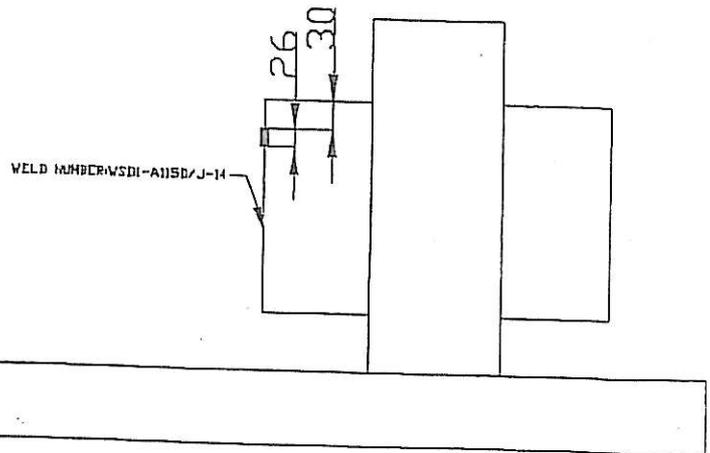
One longitudinal crack was found by use of MT on WSD1-A115D/J-14.

检验员 (Inspector): Cai Xinxin

日期 (Date): 2009.09.24

焊缝返修位置示意图:

Draft of Welding Discontinuity:



This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-102 of the
Standard Specifications
Initial SL Date: 9/24/09

产生原因:

Cause:

1. 焊缝的位置比较狭窄, 碳刨时, 不能准确的将缺陷刨出.
 2. 打磨工在打磨时, 不够仔细, 没有将所有的缺陷去除.
1. The access space was quite narrow resulting in making it difficult to arc-gouge the defects effectively.
 2. The grinder was not observant during the grinding operation resulting in the indications not being completely removed.

车间负责人 (Foreman): *Lishiguan* 日期 (Date): 09.09.26

处理意见

Disposition:

1. QC shall monitor and direct the welder and the grinder doing the repair operation.
 2. Preheat before gouging; the temperature shall be at least 65°C.
 3. Gouge the weld to remove identified defects.
 4. Joint details shall refer to the approved WPS repair.
 5. Grind the gouged areas to a smooth and shiny surface.
 6. Verify with VT and MT to ensure no defects remain in the weld joint prior to welding.
 7. QC shall monitor all welding passes being deposited.
 8. QC shall ensure all slag has been removed prior the deposition of next pass.
 9. Preheat and maintain interpass temperature control in accordance with the WPS.
 10. Blend the weld repaired areas into the adjacent weld or base metal by grinding.
 11. Perform VT, MT and UT NDT inspection to the repaired areas.
1. 在返修过程中, QC 应该监控和指导焊工和打磨工;
 2. 碳刨之前必须先进行预热, 温度不低于 65° C;
 3. 碳刨去除缺陷;
 4. 缺陷被完全消除后, 必须准备一个正确的接头型式, 具体接头型式请参见对应的修补焊接工艺规程(WPS);
 5. 将碳刨面打磨光滑;
 6. 在准备好焊接接头焊接前, 用 VT 和 MT 检测缺陷被完全消除;
 7. 在返修过程中, QC 确认焊道清理干净;
 8. 在进入下到焊缝前, QC 应该保证所有的缺陷已经去除;
 9. 根据 WPS 控制预热和焊道的温度;
 10. 打磨返修区域与临近焊缝和母材其平;
 11. VT, MT 和其它 NDT 检测焊缝.

工艺:

Technical Engineer: *Zhay T...*

审核:

Approved By: *Luy...*

日期:

Date: 09.09.27

#R787-QCP-900



关键焊缝返修报告

版本
Rev. No.:

Critical Welding Repair Report (CWR)

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR278
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5974
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1. 碳刨打磨后, 要圆滑过度, VT和MT确认所有的缺陷已经去除, ;
2. 教导在烧格透焊缝和焊道清理时, 焊工必须负责任;
3. 关键焊缝返修时, 主要的QC负责人要在现场;

1. Grind smoothly transition after gouging. Perform VT and MT to ensure all the defects have been removed.
2. Instruct the welder that it is his responsibility to produce sound welds and perform interpass cleaning.
3. Greater QC presence during critical welding operations.

车间负责人 (Foreman):

Li Shiquan

日期 (Date):

07.09.26

参照的WPS编号 Repair WPS No.:	WPS-345-FCAW-2 G (2F) -Repair WPS-345-FCAW-3 G (3F) -Repair WPS-345-SMAW-2 G(2F)-Repair WPS-345-SMAW-3 G(3F)-Repair	工艺员 Technologist:	2key Jindong 07.09.27
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	100°C	返修的缺陷 Description of Discontinuity:	3x 2x
焊前处理检查 Inspection Before Welding:	ACU	焊前预热温度 Preheat Temperature Before Welding:	200°C
最大碳刨深度 Max. Depth of Gouge:	20	碳刨总长 Total Length of Gouge:	400 mm
焊工 Welder:	202100	焊接类型 Welding Type:	SMAW
焊接电流 Current:	160	焊接电压 Voltage:	23
		焊接位置 Position:	3G
		焊接速度 Speed:	90

返修后检查

Inspection After Repair:

外观检查 VT Result:	ACU	检验员 Inspector:	ZuLe Feng	日期 Date:	2009.10.28
NDT复检 NDT Result:	MT ACU	探伤员 NDT Person:	Cai Xinxin	日期 Date:	09.11.24

见证:

Witness/Review:

备注:

Remark:

#R787-QCP-900



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-5974R1 DATE日期 2009.11.21 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: WSD1-A115D/J
1st lifting Tower(W) 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/A709M-HPS-485WT2
25/70mm

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			

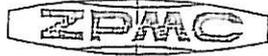
WSD1-A115D/J-14	1R1			ACC.		
-----------------	-----	--	--	------	--	--

AFTER T-CWR278

BLANK

EXAMINED BY主探: Cai Xinxin *Cai Xinxin* 09.11.21 REVIEWED BY 审核: Zhou Hongyun *Zhou Hongyun* 09.11.21
LEVEL - II SIGN 签名 / DATE日期 LEVEL-II SIGN 1 / DATE日期

质量经理 / QCM: *Li Jinhua* 09.11.21 用户CUSTOMER: _____
签字 SIGN / 日期 DATE 签字 SIGN / 日期 DATE



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR279
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

在对WSD1-A115D/J-224检测时, 发现1处纵向裂纹。L=14mm Y=15mm

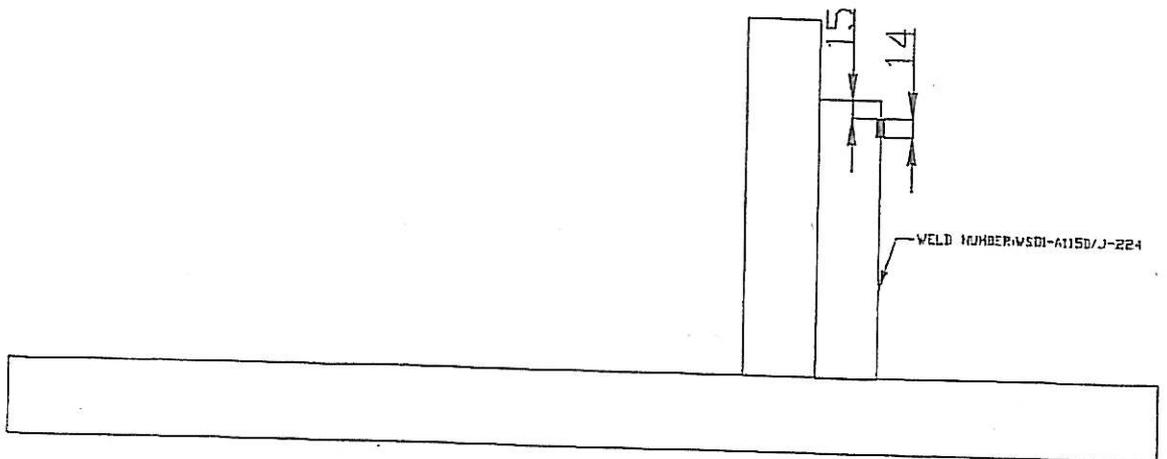
Welder ID No. (焊工编号): 066716 Position:(位置): 3F

One longitudinal crack was found by use of MT on WSD1-A115D/J-224.

检验员 (Inspector): Cai Xinxin 日期 (Date): 2009.09.24

焊缝返修位置示意图:

Draft of Welding Discontinuity:



This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SF: Date: 09/23/09

产生原因:

Cause:

1. 焊缝的位置比较狭窄, 碳刨时, 不能准确的将缺陷刨出.
 2. 打磨工在打磨时, 不够仔细, 没有将所有的缺陷去除.
-
1. The access space was quite narrow resulting in making it difficult to arc-gouge the defects effectively.
 2. The grinder was not observant during the grinding operation resulting in the indications not being completely removed.

车间负责人 (Foreman): *Lishiguan* 日期 (Date): *09.09.26*

处理意见

Disposition :

1. QC shall monitor and direct the welder and the grinder doing the repair operation.
 2. Preheat before gouging; the temperature shall be at least 65°C.
 3. Gouge the weld to remove identified defects.
 4. Joint details shall refer to the approved WPS repair.
 5. Grind the gouged areas to a smooth and shiny surface.
 6. Verify with VT and MT to ensure no defects remain in the weld joint prior to welding.
 7. QC shall monitor all welding passes being deposited.
 8. QC shall ensure all slag has been removed prior the deposition of next pass.
 9. Preheat and maintain Interpass temperature control in accordance with the WPS.
 10. Blend the weld repaired areas into the adjacent weld or base metal by grinding.
 11. Perform VT, MT and UT NDT inspection to the repaired areas.
-
1. 在返修过程中, QC 应该监控和指导焊工和打磨工;
 2. 碳刨之前必须先进行预热, 温度不低于 65° C;
 3. 碳刨去除缺陷;
 4. 缺陷被完全消除后, 必须准备一个正确的接头型式, 具体接头型式请参见对应的修补焊接工艺规程(WPS);
 5. 将碳刨面打磨光滑;
 6. 在准备好焊接接头焊接前, 用 VT 和 MT 检测缺陷被完全消除;
 7. 在返修过程中, QC 确认焊道清理干净;
 8. 在进入下到焊缝前, QC 应该保证所有的缺陷已经去除,
 9. 根据 WPS 控制预热和焊道的温度;
 10. 打磨返修区域与临近焊缝和母材其平;
 11. VT,MT和其它NDT检测焊缝。

工艺:

Technical Engineer:

Zhay Tnduy

审核:

Approved By:

Luy Zankua

日期:

Date:

09.09.27

#R787-QCP-900

This document is APPROVED
 State of California
 DEPARTMENT OF TRANSPORTATION
 Pursuant to Section 5-1.02 of the
 Standard Specifications
 Initial *SFC* Date *09/26/07*



关键焊缝返修报告

版本
Rev. No.:

Critical Welding Repair Report (CWR)

0

项目名称 Project Name:	英国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR279
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1. 碳刨打磨后, 要圆滑过度, VT和MT确认所有的缺陷已经去除, ;
2. 教导在烧熔透焊缝和焊道清理时, 焊工必须负责任;
3. 关键焊缝返修时, 主要的QC负责人要在现场;
1. Grind smoothly transition after gouging. Perform VT and MT to ensure all the defects have been removed.
2. Instruct the welder that it is his responsibility to produce sound welds and perform interpass cleaning.
3. Greater QC presence during critical welding operations.

车间负责人 (Foreman):

Li Shiguan

日期 (Date):

07.09.26

参照的WPS编号 Repair WPS No.:	WPS-345-FCAW-2 G (2F) -Repair WPS-345-FCAW-3 G (3F) -Repair WPS-345-SMAW-2 G(2F)-Repair WPS-345-SMAW-3 G(3F)-Repair	工艺员 Technologist:	Zhang Tingling 07.09.27
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	110 ^o C	返修的缺陷 Description of Discontinuity:	裂纹
焊前处理检查 Inspection Before Welding:	Au	焊前预热温度 Preheat Temperature Before Welding:	200 ^o C
最大碳刨深度 Max. Depth of Gouge:	20	碳刨总长 Total Length of Gouge:	50 mm
焊工 Welder:	202100	焊接类型 Welding Type:	SMAW
焊接电流 Current:	165	焊接电压 Voltage:	22.8
		焊接位置 Position:	3G
		焊接速度 Speed:	95

返修后检查

Inspection After Repair:

外观检查 VT Result:	Au	检验员 Inspector:	Xu Le Feng	日期 Date:	2009.10.05
NDT复检 NDT Result:	MT Au	探伤员 NDT Person:	Cai Xinxin	日期 Date:	09.11.21

见证:

Witness/Review:

备注:

Remark:

#R787-QCP-900



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115DJJ	报告编号 Report No.:	T-CWR 280
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:
Description of Welding Discontinuity:

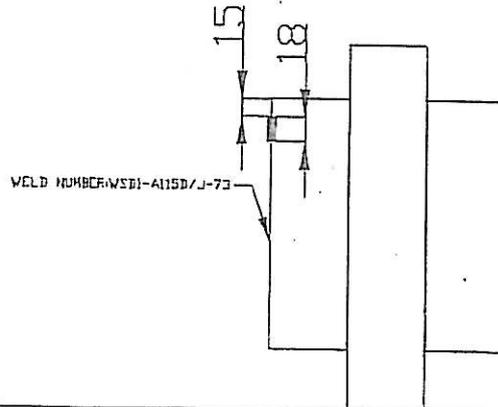
在对WSD1-A115DJJ-73检测时, 发现1处纵向裂纹。L=18mm Y=15mm

Welder ID No. (焊工编号): 067550 Position:(位置): 3F

One longitudinal crack was found by use of MT on WSD1-A115DJJ-73.

检验员 (Inspector) : Cai Xinxin 日期 (Date) : 2009.09.24

焊缝返修位置示意图:
Draft of Welding Discontinuity:



This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial SCS Date: 09/24/09

产生原因:

Cause:

1. 焊缝的位置比较狭窄, 碳刨时, 不能准确的将缺陷刨出.
 2. 打磨工在打磨时, 不够仔细, 没有将所有的缺陷去除.
1. The access space was quite narrow resulting in making it difficult to arc-gouge the defects effectively.
 2. The grinder was not observant during the grinding operation resulting in the indications not being completely removed.

车间负责人 (Foreman): *Lishiguan* 日期 (Date): *09.09.26*

处理意见

Disposition :

1. QC shall monitor and direct the welder and the grinder doing the repair operation.
 2. Preheat before gouging; the temperature shall be at least 65°C.
 3. Gouge the weld to remove identified defects.
 4. Joint details shall refer to the approved WPS repair.
 5. Grind the gouged areas to a smooth and shiny surface.
 6. Verify with VT and MT to ensure no defects remain in the weld joint prior to welding.
 7. QC shall monitor all welding passes being deposited.
 8. QC shall ensure all slag has been removed prior the deposition of next pass.
 9. Preheat and maintain interpass temperature control in accordance with the WPS.
 10. Blend the weld repaired areas into the adjacent weld or base metal by grinding.
 11. Perform VT, MT and UT NDT inspection to the repaired areas.
1. 在返修过程中, QC 应该监控和指导焊工和打磨工;
 2. 碳刨之前必须先进行预热, 温度不低于 65° C;
 3. 碳刨去除缺陷;
 4. 缺陷被完全消除后, 必须准备一个正确的接头型式, 具体接头型式请参见对应的修补焊接工艺规程(WPS);
 5. 将碳刨面打磨光滑;
 6. 在准备好焊接接头焊接前, 用 VT 和 MT 检测缺陷被完全消除;
 7. 在返修过程中, QC 确认焊道清理干净;
 8. 在进入下到焊缝前, QC 应该保证所有的缺陷已经去除;
 9. 根据 WPS 控制预热和焊道的温度;
 10. 打磨返修区域与临近焊缝和母材其平;
 11. VT, MT 和其它 NDT 检测焊缝。

工艺:

Technical Engineer: *Zhang Jindong*

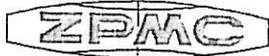
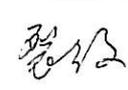
审核:

Approved By: *Luyanzhua*

日期:

Date: *09.09.27*

#R787-QCP-900

		关键焊缝返修报告				版本
		Critical Welding Repair Report (CWR)				Rev. No.:
						0
项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR280	
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975	
项目编号 Project No.:	ZP06-787					
纠正措施: Corrective Action to Prevent Re-occurrence: <ol style="list-style-type: none"> 碳刨打磨后, 要圆滑过度, VT和MT确认所有的缺陷已经去除, ; 教导在烧熔透焊缝和焊道清理时, 焊工必须负责任; 关键焊缝返修时, 主要的QC负责人要在现场; 1. Grind smoothly transition after gouging. Perform VT and MT to ensure all the defects have been removed. 2. Instruct the welder that it is his responsibility to produce sound welds and perform interpass cleaning. 3. Greater QC presence during critical welding operations.						
车间负责人 (Foreman): <u>Lishiguan</u> 日期 (Date): <u>09.09.26</u>						
参照的WPS编号 Repair WPS No.:	WPS-345-FCAW-2 G (2F) -Repair WPS-345-FCAW-3 G (3F) -Repair WPS-345-SMAW-2 G(2F)-Repair WPS-345-SMAW-3 G(3F)-Repair		工艺员 Technologist:	<u>Zhang Tindong</u> <u>09.09.27</u>		
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	90°C		返修的缺陷 Description of Discontinuity:			
焊前处理检查 Inspection Before Welding:	Au		焊前预热温度 Preheat Temperature Before Welding:	200°C		
最大碳刨深度 Max. Depth of Gouge:	18 mm		碳刨总长 Total Length of Gouge:	40 mm		
焊工 Welder:	202100	焊接类型 Welding Type:	SMAW	焊接位置 Position:	3F	
焊接电流 Current:	168	焊接电压 Voltage:	23.5	焊接速度 Speed:	95	
返修后检查 Inspection After Repair:						
外观检查 VT Result:	Au	检验员 Inspector:	<u>Zu Le Feng</u>	日期 Date:	2009.10.06	
NDT复检 NDT Result:	MT Au	探伤员 NDT Person:	<u>Cai Xinxin</u>	日期 Date:	09.11.21	
见证: Witness/Review:						
备注: Remark:						

#R787-QCP-900



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR 281
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975
项目编号 Project No.:	ZP06-787				

焊接缺陷描述:

Description of Welding Discontinuity:

在对WSD1-A115D/J-198检测时, 发现1处纵向裂纹. L=8mm Y=30mm

Welder ID No. (焊工编号): 068918 Position:(位置): 3F

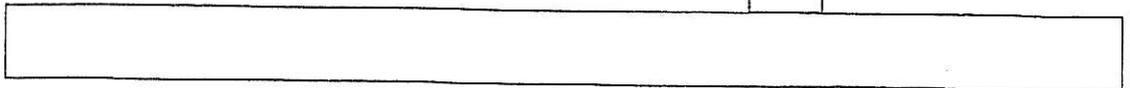
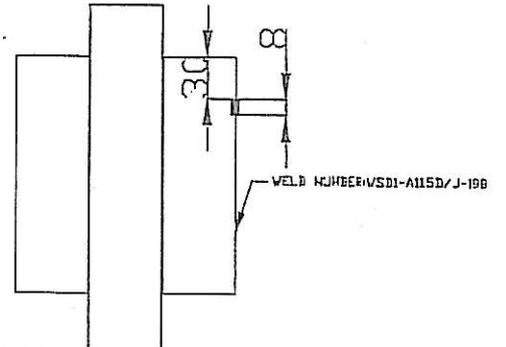
One longitudinal crack was found by use of MT on WSD1-A115D/J-198.

检验员 (Inspector): Cai Xinxin

日期 (Date): 2009.09.24

焊缝返修位置示意图:

Draft of Welding Discontinuity:



This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial CS Date: 09/24/09

产生原因:

Cause:

1. 焊缝的位置比较狭窄, 碳刨时, 不能准确的将缺陷刨出.
 2. 打磨工在打磨时, 不够仔细, 没有将所有的缺陷去除.
-
1. The access space was quite narrow resulting in making it difficult to arc-gouge the defects effectively.
 2. The grinder was not observant during the grinding operation resulting in the indications not being completely removed.

车间负责人 (Foreman): *Lishiguan* 日期 (Date): *09.09.26*

处理意见

Disposition :

1. QC shall monitor and direct the welder and the grinder doing the repair operation.
 2. Preheat before gouging; the temperature shall be at least 65°C.
 3. Gouge the weld to remove identified defects.
 4. Joint details shall refer to the approved WPS repair.
 5. Grind the gouged areas to a smooth and shiny surface.
 6. Verify with VT and MT to ensure no defects remain in the weld joint prior to welding.
 7. QC shall monitor all welding passes being deposited.
 8. QC shall ensure all slag has been removed prior the deposition of next pass.
 9. Preheat and maintain interpass temperature control in accordance with the WPS.
 10. Blend the weld repaired areas into the adjacent weld or base metal by grinding.
 11. Perform VT, MT and UT NDT inspection to the repaired areas.
-
1. 在返修过程中, QC 应该监控和指导焊工和打磨工;
 2. 碳刨之前必须先进行预热, 温度不低于 65°C;
 3. 碳刨去除缺陷;
 4. 缺陷被完全消除后, 必须准备一个正确的接头型式, 具体接头型式请参见对应的修补焊接工艺规程(WPS);
 5. 将碳刨面打磨光滑;
 6. 在准备好焊接接头焊接前, 用 VT 和 MT 检测缺陷被完全消除;
 7. 在返修过程中, QC 确认焊道清理干净;
 8. 在进入下到焊缝前, QC 应该保证所有的缺陷已经去除;
 9. 根据 WPS 控制预热和焊道的温度;
 10. 打磨返修区域与临近焊缝和母材其平;
 11. VT, MT 和其它 NDT 检测焊缝。

工艺:

Technical Engineer: *Zhang Tingting*

审核:

Approved By: *Luyankang*

日期:

Date: *09.09.27*

#R787-QCP-900

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial *STC* Date: *09/27/09*



关键焊缝返修报告

Critical Welding Repair Report (CWR)

版本
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	WSD1-A115D/J	报告编号 Report No.:	T-CWR281
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	Tower(W) 1 st lifting	NDT 报告编号 NDT Report No.:	T787-MT-5975
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1. 碳刨打磨后, 要圆滑过度, VT和MT确认所有的缺陷已经去除, ;
 2. 教导在烧熔透焊缝和焊道清理时, 焊工必须负责任;
 3. 关键焊缝返修时, 主要的QC负责人要在现场;
1. Grind smoothly transition after gouging. Perform VT and MT to ensure all the defects have been removed.
 2. Instruct the welder that it is his responsibility to produce sound welds and perform interpass cleaning.
 3. Greater QC presence during critical welding operations.

车间负责人 (Foreman):

Li Shiguan

日期 (Date):

07.07.26

参照的WPS编号 Repair WPS No.:	WPS-345-FCAW-2 G (2F) -Repair WPS-345-FCAW-3 G (3F) -Repair WPS-345-SMAW-2 G(2F)-Repair WPS-345-SMAW-3 G(3F)-Repair	工艺员 Technologist:	Shang Jindong 07.07.27
返修 (碳刨) 前预热温度 Preheat Temperature Before Gouging:	110 °C	返修的缺陷 Description of Discontinuity:	孙
焊前处理检查 Inspection Before Welding:	Au	焊前预热温度 Preheat Temperature Before Welding:	200 °C
最大碳刨深度 Max. Depth of Gouge:	15 mm	碳刨总长 Total Length of Gouge:	40 mm
焊工 Welder:	202100	焊接类型 Welding Type:	SMAW
焊接电流 Current:	165	焊接电压 Voltage:	23.5
		焊接位置 Position:	3F
		焊接速度 Speed:	90

返修后检查
Inspection After Repair:

外观检查 VT Result:	Au	检验员 Inspector:	Xu Le Feng	日期 Date:	2007.10.06
NDT复检 NDT Result:	MT Au	探伤员 NDT Person:	Cai Xinxin	日期 Date:	07-11-24

见证:
Witness/Review:备注:
Remark:



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-5975R1 DATE日期 2009.11.21 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: WSD1-A115D/J
1st lifting Tower(W) 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/A709M-HPS-485WT2-Z 25/75/45mm

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			
WSD1-A115D/J-224	1R1			ACC.		
WSD1-A115D/J-73	1R1			ACC.		
WSD1-A115D/J-198	1R1			ACC.		

AFTER T-CWR279-281

BLANK

EXAMINED BY主探 Cai Xinxin *Cai Xinxin* 09.11.21 / REVIEWED BY 审核 *Zhu Yongjun* 09.11.21 /
LEVEL - II SIGN 签名 / DATE日期 LEVEL-II SIGN / DATE日期

质量经理 / QCM *Lu Junchu* 用户CUSTOMER _____
签字 SIGN / 日期 DATE 09.11.21 签字 SIGN / 日期 DATE _____



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-6015 DATE日期 2009.09.23 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: WSD1-A115D/J WSD1-A115E/J THE 1st Lifting Tower(W)		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 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	<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-Z A709M-HPS-485WT2-Z 45/60/75mm
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			
WSD1-A115D/J-160				ACC.		100%MT
WSD1-A115D/J-162				ACC.		100%MT
WSD1-A115D/J-163				ACC.		100%MT
WSD1-A115D/J-165				ACC.		100%MT
WSD1-A115D/J-28				ACC.		100%MT
WSD1-A115D/J-30				ACC.		100%MT
WSD1-A115D/J-31				ACC.		100%MT
WSD1-A115D/J-33				ACC.		100%MT
WSD1-A115E/J-159				ACC.		100%MT
WSD1-A115E/J-161				ACC.		100%MT
WSD1-A115E/J-162				ACC.		100%MT
WSD1-A115E/J-164				ACC.		100%MT
WSD1-A115E/J-33				ACC.		100%MT
WSD1-A115E/J-35				ACC.		100%MT
WSD1-A115E/J-39				ACC.		100%MT
WSD1-A115E/J-41				ACC.		100%MT

EXAMINED BY 主探 Cai Xinxin <i>Cai Xinxin</i>	REVIEWED BY 审核 <i>Wang</i>
LEVEL - II SIGN 签名 / DATE日期 质量经理 / QCM <i>L. J. J.</i>	LEVEL-II SIGN / DATE日期 用户CUSTOMER <i>Wang</i>
签字 SIGN / 日期 DATE <i>09. 4. 23</i>	签字 SIGN / 日期 DATE



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-5975

DATE日期 2009.09.24

PAGE OF页码 1/3

Revision No: 0

PROJECT NO. 工程编号: ZP06-787

CONTRACTOR: 用户: CALTRANS

DRAWING NO. 图号: WSD1-A115D/J
1st lifting Tower(W)

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. 28th, 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/A709M-HPS-485WT2-Z
25/75/45mm

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			
WSD1-A115D/J-243				ACC.		100%MT
WSD1-A115D/J-240				ACC.		100%MT
WSD1-A115D/J-239				ACC.		100%MT
WSD1-A115D/J-236				ACC.		100%MT
WSD1-A115D/J-235				ACC.		100%MT
WSD1-A115D/J-232				ACC.		100%MT
WSD1-A115D/J-229				ACC.		100%MT
WSD1-A115D/J-226				ACC.		100%MT
WSD1-A115D/J-224	1	longitudinal crack	14		REJ.	Y=15
WSD1-A115D/J-222				ACC.		100%MT
WSD1-A115D/J-77				ACC.		100%MT
WSD1-A115D/J-80				ACC.		100%MT
WSD1-A115D/J-73	1	longitudinal crack	18		REJ.	Y=15

EXAMINED BY 主检
Cal Xinjin *Cal Xinjin*
LEVEL-II SIGN 签名 / DATE日期 9.9.24
质量经理 / QCM *Luzhanhua* 9/24/09
签字 SIGN / 日期 DATE

REVIEWED BY 审核
Zhou
LEVEL-II SIGN 签名 / DATE日期 9.9.24
用户 CUSTOMER
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
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-000297**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Sep-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0359**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: 27-Aug-2009**Description of Non-Conformance:**

During Magnetic Particle Testing (MT) of weld joints WSD1-A115-D/J-14, 73, 60, 165, 198, 222 and 224 at West Tower, 28m Diaphragm Fit Lugs, QA discovered seven (7) rejectable linear indications measuring approximately 8 to 26 mm in length. These welds were previously tested and accepted by ZPMC QC MT technicians.

Contractor's proposal to correct the problem:

Repair affected welds.

Corrective action taken:

Welds have been repaired, verified by QA, and subsequently 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 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

Reviewed By: Wahbeh, Mazen

QA Reviewer