

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



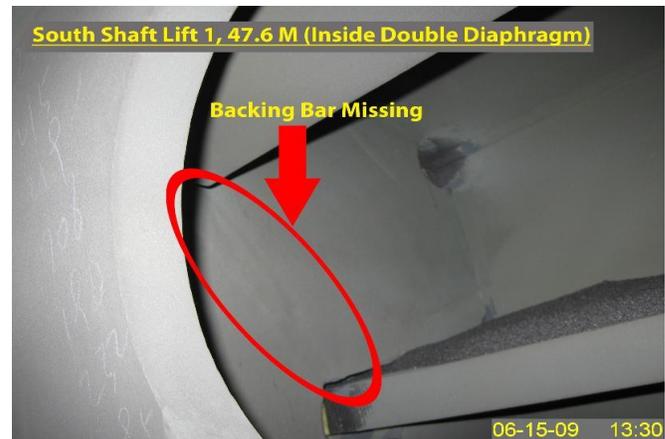
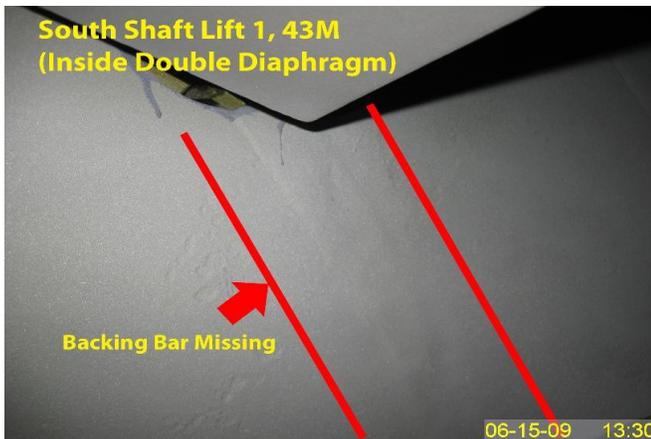
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-000322**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0296**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: South Tower, Lift 1
Procedural	Procedural	Description: Missing backing bars in South Tower, Lift 1	

Reference Description: Missing backing bars on diaphragm corner piece welds in South Tower, Lift 1**Description of Non-Conformance:**

During random visual after blast inspection of South Tower, Lift 1, QA observed that there are no backing bars on diaphragm corner piece welds SSD1-A164H/J-194 & SSD1-A164G/J-215. These welds were previously accepted by ZPMC QC Personnel.

**Applicable reference:**

Weld Joint Detail WT-63 specifies backing bar.

Who discovered the problem: Amit K. Juvekar**Name of individual from Contractor notified:** Don Walton**Time and method of notification:** 6/15/09, 15:30; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 6/17/09, 14:00; Verbal**QC Inspector's Name:** Ken Zhang**Was QC Inspector aware of the problem:**

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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: 17-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: 05.03.06-000285

Subject: NCR No. ZPMC-0296

Reference Description: Backing Bars / South Shaft Lift 1 / 43m & 47.6m Diaphragm CJP 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 random visual after blast inspection of South Tower, Lift 1, QA observed that there are no backing bars on diaphragm corner piece welds SSD1-A164H/J-194 & SSD1-A164G/J-215. These welds were previously accepted by ZPMC QC Personnel.

Weld Joint Detail WT-63 specifies backing bar.

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. In addition to the material/workmanship non-conformance, propose a resolution that addresses the Quality Control issue with regard to the missing backing bars. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0296

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000285

Subject: NCR No. ZPMC-0296

Dated: 24-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000313 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: Backing bars are required for welding purposes only and are not needed for structural integrity of the Tower. ZPMC chose to remove the backing bars.

Backing bars are required for welding purposes only and are not needed for structural integrity of the Tower. ZPMC chose to remove the backing bars. By removing backing bars we have a better weld condition. ZPMC requests closure if this NCR.

Submitted by:

Attachment(s): ABF-NPR-000313R00

Caltrans' comments:

Status: REJ

Date: 01-Sep-2009

The proposed resolution is not acceptable. Weld detail WVT-63 shown on the approved shop drawings for this weld includes a backing bar. For future welds where the backing bar will be removed, please notify the Engineer.

Please submit acceptable inspection documents for the weld in question. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0296 at that time.

Submitted by: Wright, Doug

Date: 01-Sep-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000285

Subject: NCR No. ZPMC-0296

Dated: 21-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000313 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC removed the backing bars from the welds, SSD1-A164H/J-194 and SSD1-A164G/J-215 to perform repairs. ZPMC has provided UT reports which show that the weld is sound after the repairs.

ZPMC removed the backing bars from the welds, SSD1-A164H/J-194 and SSD1-A164G/J-215 to perform repairs. ZPMC has provided UT reports which show that the weld is sound after the repairs. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000313R01;

Caltrans' comments:

Status: AAP

Date: 27-Oct-2009

The Department agrees that the objective evidence that supports the acceptability of the welds has been provided.

However, this NPR (ABF-NPR-000313R01) does not address the Quality Control issue with regard to the missing backing bars. In addition, please provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Submitted by: Lee, Ken

Attachment(s): NPR CT Comments

Date: 27-Oct-2009



No. T-066

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-10-19

REGARDING: NCR-000322(ZPMC-0296), NCR-000411(ZPMC-0385)

ZPMC received NCR-000322(ZPMC-0296), NCR-000411(ZPMC-0385), they mentioned that CT inspector discovered that backing bars had been attached with intermittent fillet welds outside of the weld joints. The relational welds were SSD1-A164H/J-194, SSD1-A164G/J-215, SSSL3-1C/K-96, and SSSL3-1C/K-97.

For ZPMC-0296, ZPMC found indications deeply in the welds SSD1-A164H/J-194, SSD1-A164G/J-215, and they had to be gouged from the backing bars, so the backing bars were removed. For ZPMC ZPMC-0385, ZPMC had realized this problem, and already made continuous full length weld on the backing bars, according to AWS D1.5-2002 Section 3.3.7.6. As a result, ZPMC finally performed re-inspection by UT, and the result showed the welds were acceptable. In order to avoid such problem occurs again ZPMC will perform welding work according to related procedures strictly, and engineer will be informed when backing bars will be removed, also ZPMC will enhance welder and QC be more responsible. Here attached reports to prove the welds were perfect after re-welding on the backing bars.

So ZPMC hope Caltrans could take a review and close these NCRs.

ATTACHMENT:

NCR-000322(ZPMC-0296)

NCR-000411(ZPMC-0385)

T-WR1099

T787-UT-1342R2

T-WR1097

T787-UT-1340R2

T787-UT-2345

Zhang Junchi 2009.10.19



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: 17-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: 05.03.06-000285

Subject: NCR No. ZPMC-0296

Reference Description: Backing Bars / South Shaft Lift 1 / 43m & 47.6m Diaphragm CJP Welds

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Material Location: Tower

Lift: 01

Remarks:

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Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0296

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

File: 05.03.06

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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



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	SSD1-A164H/J	报告编号 Report No.	T-WR1099
合同号 Contract No.:	04-0120F4	部件名称 Items Name	FIRST LIFTING TO	NDT报告编号 Report No. of NDT	T787-UT-1341
项目编号 Project No.:	ZP06-787		WER(S) SKIN D,E		R1

缺陷描述:

Description of welding discontinuity:

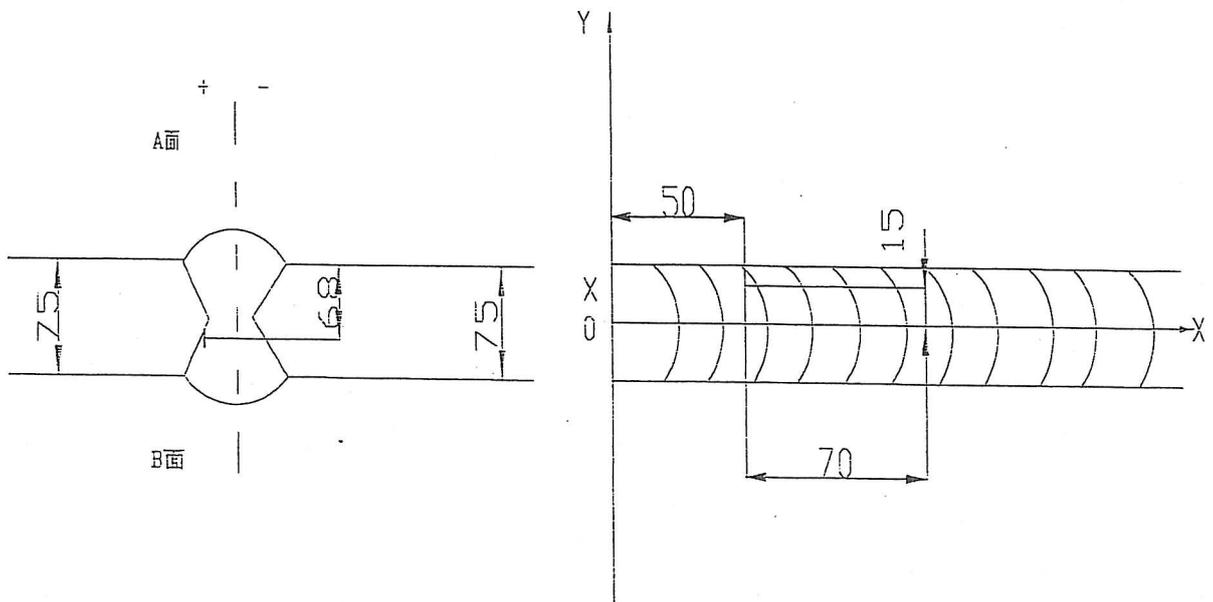
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。SSD1-A164H/J-194)

检验员 (Inspector): Dai Gengsheng 日期(Date): 09.03.20

焊缝返修位置示意图

Draft of welding discontinuity:



WELD NUMBER: SSD1-A164H/J-194

产生原因:

Caused:

- 1、 碳弧气刨, 焊接接头没有有效打磨;
 - 2、 起弧和收弧没有交错布置, 以减少熔渣最少到最少;
 - 3、 保温层没有有效的清理。
1. The weld joint was not ground sufficiently after arc-gouging.
 2. The arc starts and stops were not staggered to minimize slag entrapment.
 3. Interpass cleaning was not performed properly.

车间负责人(Foreman): *Lu Yefei* 日期(Date): *09.03.21*

处理意见

Disposition:

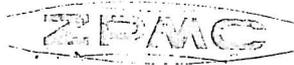
- 1、 Gouge off the defect weld;
- 2、 Grind smoothly the gouged surface;
- 3、 If User's request, check with VT or other NDT method to make sure the defect remove completely;
- 4、 Preheat and the interpass temperature control according to the relative WPS-repair;
- 5、 Check the welding according to the approved shop drawing.

- 1、 请将有缺陷的焊缝碳刨去除;
- 2、 将碳刨处打磨光滑;
- 3、 如用户要求, 用 VT 或其它的无损检测方法证实缺陷被完全清除;
- 4、 按批准后返修焊接工艺规程 WPS 要求进行预热和控制道间温度;
- 5、 按图纸要求检测焊缝。

zhang jindong 5.22/09
Technical engineer

审核:
Approved by

日期
Date



焊缝返修报告

Rev. No

Welding Repair Report

0

项目名称 Project Name	美国海明大桥 SFOBB	零件图号 Drawing No.	SSD1-A164H/J	报告编号 Report No.	T-WR1099
合同号 Contract No.:	04-0120F4	零件名称 Items Name	FIRST LIFTING TO WER(S) SKIN D,E	NDT 报告编号 Report No. of NDT	T787-UT-1341 R1
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

- 1、碳钎后的接头位置打磨更滑过渡，保证每道焊缝的接头可以交错布置。
 - 2、认真仔细检查每道焊缝和加强焊道的清理。
 3. 焊缝中所有的焊渣全部去除后，表面的缺陷全部打磨干净。
1. The joint shall be ground to a smooth transition to ensure that arc starts and stops are in a staggered Arrangement.
 2. QC shall inspect the weld passes more carefully and enforcing interpass cleaning.
 3. All weld slag shall be removed and surface defects ground during interpass cleaning.

车间负责人(Foreman):

Lu Yefei

日期(Date): *09.03.21*

参照的WPS编号
Repair WPS No.

WPS-345-FCAW-1
G (1F) -Repair
WPS-345-FCAW-2
G (2F) -Repair
WPS-345-SMAW-1
G(1F)-Repair
WPS-~~485~~5-SMAW-3
G(2F)-Repair

工艺员
technologist

Zhangjindong 3.21

返修(碳钎)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>焊接缺陷 IIF</i>
焊前处理检查 Inspection before welding	<i>VT. Au</i>	焊前预热温度 Preheat temperature before welding	<i>192°C</i>
最大碳钎深度 Max. depth of gouging	<i>15mm</i>	碳钎总长 Total length of gouging	<i>150mm</i>
焊工 welder	<i>066479</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>160 A</i>	焊接电压 Voltage	<i>23.5 V</i>
		焊接位置 position	<i>3G</i>
		焊接速度 Speed	<i>110 mm/min</i>

返修后检查 Inspection After repairing:

外观检查 VT result	<i>VT. Au</i>	检验员 Inspector	<i>Lu Yefei</i>	日期 Date	<i>09.04.05</i>
NDT复检 NDT result	<i>Au</i>	探伤员 NDT person	<i>Xu Rongyuan</i>		<i>09.04.05</i>

见证:
Witness/Review:

备注:
Remark:



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-1341R2 DATE 2009.04.07 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: FIRST LIFTING TOWER(S) SKIN D,E DRAWING NO.: SSD1-A164H/J CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SMAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-HPS-485WT2-Z 75mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm	Changchao	45°	2.5MHz	18×18mm
Changchao	0°	2.5MHz	20mm	Reference Level 参考灵敏度		20dB	

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y			
SSD1-A164H/J-101		70				33									ACC.	
	1R2	45				34									ACC.	
SSD1-A164H/J-194	1R2	70				33									ACC.	
		45				34									ACC.	

AFTER T-WR1098-1099

BLANK

EXAMINED BY 主探 Xu Ronggang (9.04.09) LEVEL - II SIGN / DATE	REVIEWED BY 审核 Tang Xinyi (9.04.09) LEVEL - II SIGN / DATE
---	--

质量经理 / QCM 签字 SIGN / 日期 DATE	用户 CUSTOMER 签字 SIGN / 日期 DATE
-------------------------------------	--------------------------------------



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	SSD1-A164G/J	报告编号 Report No.	T-WR1097
合同号 Contract No.:	04-0120F4	部件名称 Items Name	FIRST LIFTING TO WER(S) SKIN D,E	NDT报告编 号 Report No. of NDT	T787-UT-1340 R1
项目编号 Project No.:	ZP06-787				

缺陷描述:

Description of welding discontinuity:

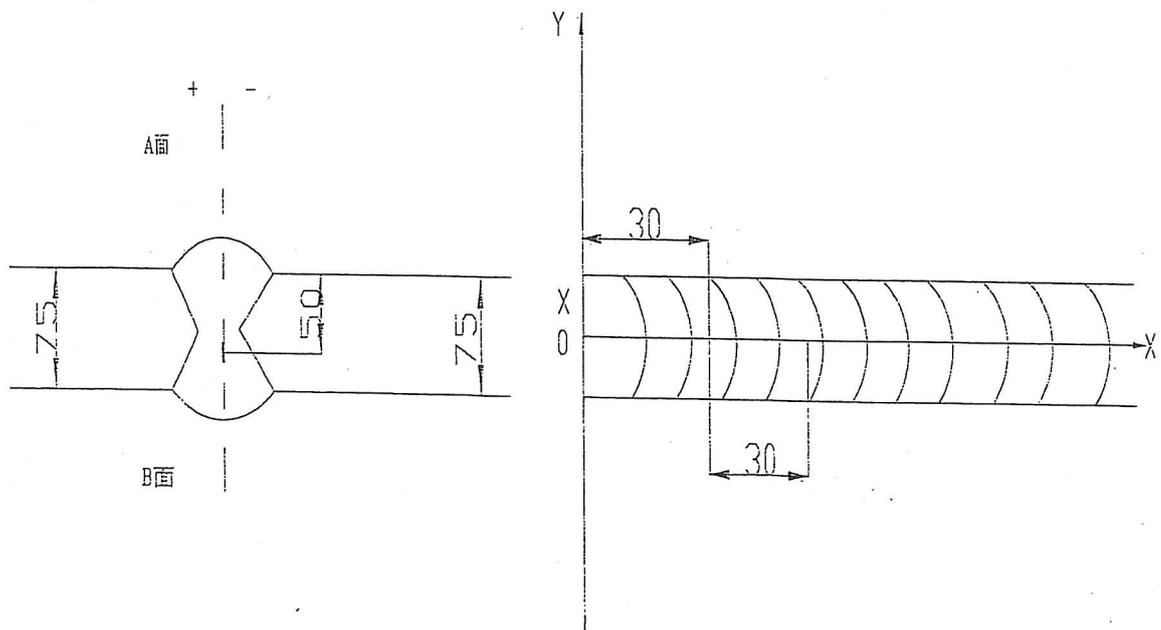
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。SSD1-A164G/J-215)

检验员 (Inspector): Dai Gengsheng 日期(Date): 09.03.20

焊缝返修位置示意图

Draft of welding discontinuity:



WELD NUMBER: SSD1-A164GJ-215

产生原因

Caused:

1. 电弧引弧时没有有效打磨。
 2. 起弧和收弧没有交错布置,以将焊缝减少到最少。
 3. 焊缝间没有有效的清理。
1. The weld joint was not ground sufficiently after arc-gouging.
2. The arc starts and stops were not staggered to minimize slag entrapment.
3. Interpass cleaning was not performed properly.

车间负责人(Foreman): Lu Yefei 日期(Date): 09.03.21

处理意见

Disposition:

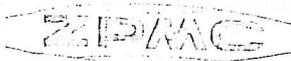
1. Gouge off the defect weld;
2. Grind smoothly the gouged surface;
3. If User's request, check with VT or other NDT method to make sure the defect remove completely;
4. Preheat and the interpass temperature control according to the relative WPS-repair;
5. Check the welding according to the approved shop drawing.

- 1、请将有缺陷的焊缝碳刨去除;
- 2、将碳刨处打磨光滑;
- 3、如用户要求,用VT或其它的无损检测方法证实缺陷被完全清除;
- 4、按批准后返修焊接工艺规程 WPS 要求进行预热和控制道间温度;
- 5、按图纸要求检测焊缝。

Technical engineer: zhang jindong 3.22/09

审核:
Approved by

日期
Date



焊缝返修报告

Welding Repair Report

Rev. No

0

项目名称 Project Name	美国海防工件 SFOBB	图样编号 Drawing No.	SSD1-A164G/J	报告编号 Report No.	T-WR1097
合同号 Contract No.:	04-0120F4	部件名称 Items Name	FIRST LIFTING TO WER(S) SKIN D,E	NDT 报告编号 Report No. of NDT	T787-UT-1340
项目编号 Project No.:	ZP06-787				R1

纠正措施:

Correction action to prevent re occurrence:

1. 碳钎后的接头位置打磨及滑过渡, 保证每道焊缝的接头可以交错布置;
 2. 认真仔细检查每道焊缝和加强焊道的清理;
 3. 焊缝中所有的焊渣全部去除后, 表面的缺陷全部打磨干净。
1. The joint shall be ground to a smooth transition to ensure that arc starts and stops are in a staggered Arrangement.
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车间负责人(Foreman): *Lu Yefei*日期(Date): *09.03.21*参照的WPS编号
Repair WPS No.

WPS-345-FCAW-1
G (1F) -Repair
WPS-345-FCAW-2
G (2F) -Repair
WPS-345-SMAW-1
G(1F)-Repair
WPS-~~345~~-SMAW-3
G(3F)-Repair

工艺员
technologist*zhongjindong srz/s*

返修(碳钎)前预热温度 Preheat temperature before gouging	<i>MA</i>	返修的缺陷 Description of discontinuity	<i>夹渣 slag</i>
焊前处理检查 Inspection before welding	<i>VT. Acc</i>	焊前预热温度 Preheat temperature before welding	<i>207 °C</i>
最大碳钎深度 Max. depth of gouging	<i>30 mm</i>	碳钎总长 Total length of gouging	<i>120 mm</i>
焊工 welder	<i>066457</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>172 A</i>	焊接电压 Voltage	<i>24.2 V</i>
返修后检查 Inspection After repairing:		焊接位置 position	<i>36</i>
		焊接速度 Speed	<i>112 mm/min</i>

Inspection After repairing:

外观检查 VT result	<i>VT. Acc</i>	检验员 Inspector	<i>Lu Yefei</i>	Date	<i>09.04.05</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Xu Peng peng</i>		<i>09.04.07</i>

见证:

Witness/Review:

备注:

Remark:

#R787-QCP-900



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-1340R2 DATE 2009.04.07 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: FIRST LIFTING TOWER(S) SKIN D E DRAWING NO.: SSD1-A164F/J,G/J CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SMAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-HPS-485WT2-Z 75mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm	Changchao	45°	2.5MHz	18×18mm
Reference Level 参考灵敏度				20dB			

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
SSD1-A164G/J-215	1R2	70				34									ACC.	
		45				33									ACC.	

AFTER T-WR1097

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EXAMINED BY 主探 LEVEL - II SIGN / DATE (04.07)	REVIEWED BY 审核 LEVEL - II SIGN / DATE (04.07)
质量经理 / QCM _____ 签字 SIGN / 日期 DATE,	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE



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: 18-Sep-2009

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0385

Job Name: SAS Superstructure
Document No: 05.03.06-000373

Reference Description: Backing Bar Welds / South Shaft Lift 3 / Intermittent Fillet 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: 03

Remarks:

During Ultrasonic Testing (UT) of the South Tower, Lift 3 welds SST13-1C/K-96 & 97, QA discovered that backing bars have been attached with intermittent fillet welds outside of the weld joints. These weld joints were previously tested and accepted by ZPMC Quality Control Personnel.

AWS D1.5-2002, Section 3.3.7.6 - "Tack welds used to attach steel backing and placed external to the weld joint shall be made continuous by fillet welding for the full length of the backing or shall be removed."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance, documenting that the deficiency has been brought in compliance with the contract requirements.

In addition, to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to identify the deficiency. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

This same type of deficiency has previously resulted in the issuance of NCR ZPMC-0247.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0385

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

File: 05.03.06

05.03.06-000373,NCT

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-000411

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 16-Sep-2009

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

NCR #: ZPMC-0385

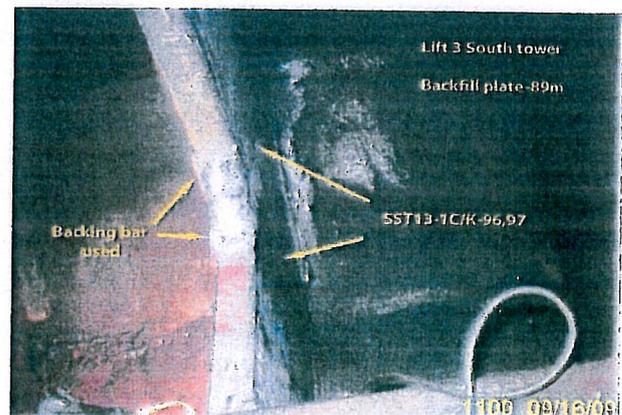
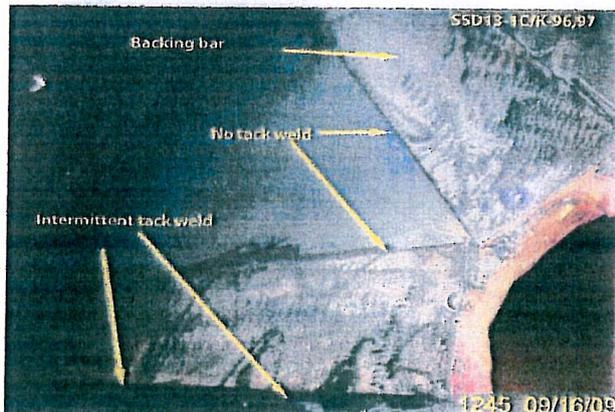
Type of problem:

Welding Concrete Other
Welding Curing Procedural Bridge No: 34-0006
Joint fit-up Coating Other Component: South Tower
Procedural Procedural Description: South Tower, Lift 3

Reference Description: Backing bars with intermittent fillet welds in South Tower, Lift 3

Description of Non-Conformance:

During Ultrasonic Testing (UT) of the South Tower, Lift 3 welds SST13-1C/K-96 & 97, QA discovered that backing bars have been attached with intermittent fillet welds outside of the weld joints. These weld joints were previously tested and accepted by ZPMC Quality Control Personnel.



Applicable reference:

AWS D1.5-2002, Section 3.3.7.6 - "Tack welds used to attach steel backing and placed external to the weld joint shall be made continuous by fillet welding for the full length of the backing or shall be removed."

Who discovered the problem: Chandrakumar Sudalaimuthu

Name of individual from Contractor notified: Steve Lawton

Time and method of notification: 9/17/2009, 14:00, E-mail

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 9/17/2009, 14:00; Verbal

QC Inspector's Name: Zhang Jiadi

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-2345 DATE 2009.10.12 PAGE 1 OF 1 Revision No: 0

PROJECT NO.: 工程编号 ZP06-787 CONTRACTOR: CALTRANS

ITEMS NAME: TOWER(S) THIRD LIFTING 89M STIFFENER DRAWING NO.: SSTL3-1C/K CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.4) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 FCAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIW BLOCK TYPE II C.M.C A709M-345T-Z 40/40mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm				
Changchao	0°	2.5MHz	20mm				

Reference Level 参考灵敏度 20dB

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
SSTL3-1C/K-99		70				34								ACC.	100%
SSTL3-1C/K-97		70				34								ACC.	100%
SSTL3-1C/K-96		70				34								ACC.	100%
BLANK															

EXAMINED BY 主探 Jiang Xing Shan DATE 09.10.12
 LEVEL - II SIGN / DATE

REVIEWED BY 审核 Xu Ronggang DATE 09.10.12
 LEVEL - II SIGN / DATE

质量经理 / QCM Lu Jun DATE 2009.10.12
 签字 SIGN / 日期 DATE

用户 CUSTOMER _____
 签字 SIGN / 日期 DATE _____

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000285

Subject: NCR No. ZPMC-0296

Dated: 30-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000313 **Rev:** 02

Contractor's Proposed Resolution:

Reference Resolution: The QC inspectors understand that the importance of identifying cases where backing bars are removed and notifying the appropriate departments to address the issues. ZPMC requests closure of this NCR.

In addition to previously submitted documentation showing that the welds documented in the NCR are acceptable ZPMC QA has discussed this issue with their inspectors and the QC inspectors understand that the importance of identifying cases where backing bars are removed and notifying the appropriate departments to address the issues. The ABF JV QCM has also covered this topic during the UT and MT refresher training previously conducted. Based on these actions and the attached documentation, ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000313R02

Caltrans' comments:

Status: CLO

Date: 03-Dec-2009

The proposed resolution is acceptable. The Non-conformance ZPMC-0296 is closed.

Submitted by: Lee, Ken

Attachment(s):

Date: 03-Dec-2009

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-000312**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 22-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0296**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: 15-Jun-2009**Description of Non-Conformance:**

During visual after-blast inspection of South Tower, Lift 1, QA observed that there are no backing bars on diaphragm plate welds SSD1-A164H/J-194 & SSD1-A164G/J-215. These welds were previously accepted by ZPMC QC Personnel.

Contractor's proposal to correct the problem:

The Contractor has explained that the backing bars were removed to access and repair rejectable UT (Ultrasonic Testing) indications. The Contractor will notify the Engineer if additional backing bars are removed in the future.

Corrective action taken:

NDT results indicating sound welds have been submitted.

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**