

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-000536

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Dec-2009

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

NCR #: ZPMC-0509

Type of problem:

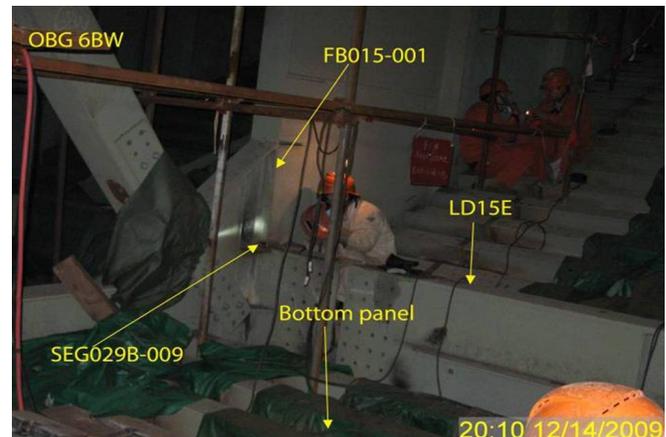
Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Segment 6BW FB Flange to Top Flange LD
Procedural	Procedural	Description:	

Reference Description: Excessive Root Opening at the Floor Beam Flange to the Top Flange of the Longitudinal Diaphragm for Segment 6BW

Description of Non-Conformance:

During a random in-process visual inspection of OBG segment 6BW, the Caltrans Quality Assurance (QA) Inspector observed an excessive root joint opening (12mm) of a complete joint penetration (CJP) weld between the Floor Beam (FB) Flange and Top Flange of the Longitudinal Diaphragm (LD) located at PP41 and W4. Additional information identifying this non-conformance is listed below.

- 1) The approved welding procedure specification (WPS) is identified as: WPS-B-T-2232-TC-U4B-F.
- 2) The affected weld is identified as: SEG029B-009
- 3) This weld is a Complete Joint Penetration (CJP)
- 4) The Floor Beam Flange is identified as: FB015-001
- 5) The Top Flange of the Longitudinal Diaphragm is identified as: LD15E
- 6) The maximum allowable root opening per this approved WPS is 5mm.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

Approved WPS; WPS-B-T-2232-Tc-U4b-F states that the root opening is 3mm (+2mm max).

AWS D1.5-2002 Section 3.3.2.1; The root opening between parts shall not exceed 5mm [3/16 in.] except in cases involving rolled shapes or plates 75mm [3 in.] or greater in thickness if, after straightening and in assembly, the root opening cannot be closed sufficiently to meet this tolerance. In such cases, a maximum root opening of 8mm [5/16 in.] may be used with a backing weld or suitable backing and the final weld meets the requirements for weld size.

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Li Jing Bo

Time and method of notification: 2045 hours, Verbal

Name of Caltrans Engineer notified: Ching Chao and Bill Howe

Time and method of notification: 0730 hours, Verbal

QC Inspector's Name: Zhang Hai Tao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge

333 Burma Road
Oakland CA 94607
Tel: Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 24-Dec-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-0509

Job Name: SAS Superstructure
Document No: 05.03.06-000497

Reference Description: Excessive Root Opening at the Floor Beam Flange to the Top Flange of the Longitudinal Diaphragm for Segment 6BW

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

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

Material Location: OBG **Lift:** 06

Remarks:

During a random in-process visual inspection of OBG segment 6BW, the Caltrans Quality Assurance (QA) Inspector observed an excessive root joint opening (12mm) of a complete joint penetration (CJP) weld between the Floor Beam (FB) Flange and Top Flange of the Longitudinal Diaphragm (LD) located at PP41 and W4.

Action Required and/or Action Taken:

Submit a repair plan to the engineer for approval. A response for the resolution of this issue is expected within 7 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0509

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000497

Subject: NCR No. ZPMC-0509

Dated: 03-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000606 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the missed indications present and retested the welds for acceptability. Attached is documentation showing the welds are sounds. Based on that ZPMC requests closure of this NCR.

ZPMC has repaired the missed indications present and retested the welds for acceptability. Attached is documentation showing the welds are sounds. Based on that ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000606R00;

Caltrans' comments:

Status: CLO

Date: 07-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 07-Mar-2010

Attachment(s):



No. B-637

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-3

REGARDING: NCR-000536(ZPMC-0509)

With this letter of response, ZPMC requests closure of CT NCR-000536(ZPMC-0509) what mentioned that CT inspector observed missed MT indication by ZPMC QC.

- Indication was found after the weld was completed. After repair this welds was tested and accepted by UT.
- Attached NDT documentation shows this weld is sound and acceptable.
- Punch List 341 what mentioning this NCR has been confirmed and closed by CT inspector.

Base on the taken actions and responses above, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000536(ZPMC-0509)

B-WR9729

B787-UT-10531R1

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

3/3/10

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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-000536

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 14-Dec-2009

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

NCR #: ZPMC-0509

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

Bridge No: 34-0006

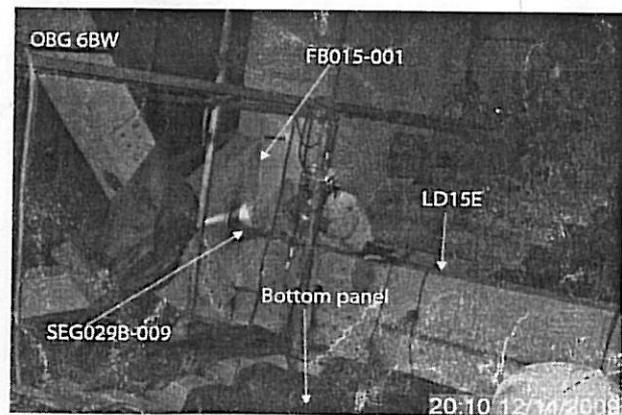
Component: Segment 6BW FB Flange to Top Flange LD

Reference Description: Excessive Root Opening at the Floor Beam Flange to the Top Flange of the Longitudinal Diaphragm for Segment 6BW

Description of Non-Conformance:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Applicable reference:

Approved WPS; WPS-B-T-2232-Tc-U4b-F states that the root opening is 3mm (+2mm max).

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QC Inspector's Name: Zhang Hai Tao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Carreon,Albert

Lead Reviewer/Task Leader

Reviewed By: Wahbeh,Mazen

SMR



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

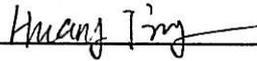
项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	OBW6	报告编号 Report No.	B-WR9729
合同号 Contract No.:	04-0120F4	部件名称 Items Name	6BW+6AW LONGIT UDINAL	NDT报告编号 Report No.of NDT	B787-UT-10531
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

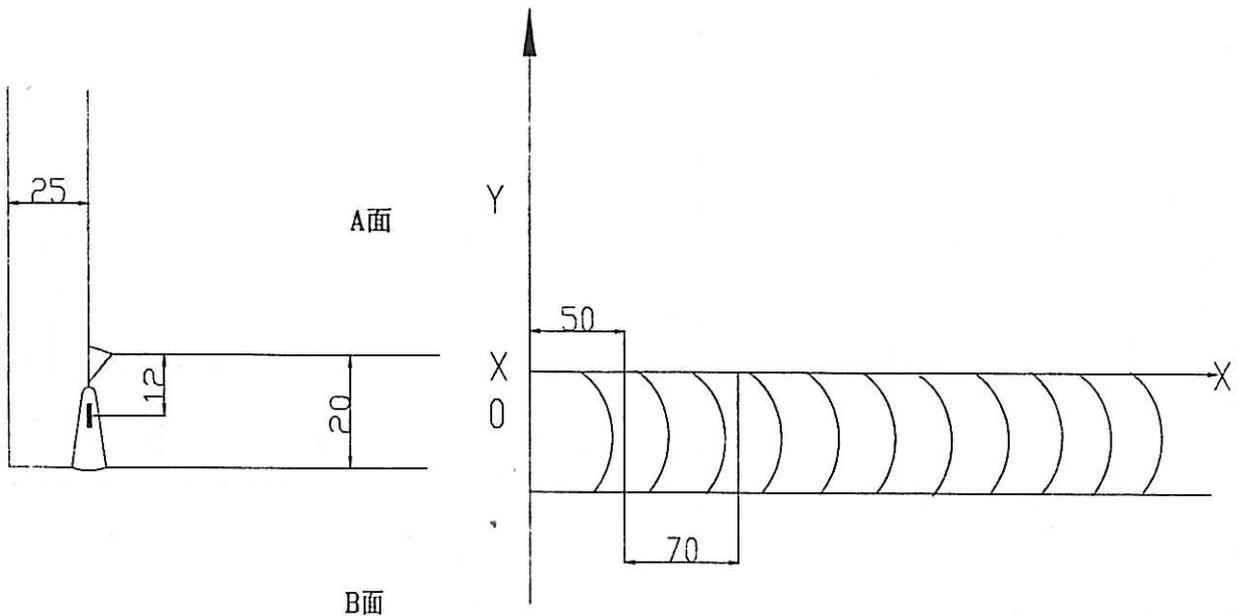
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SEG029B-009

检验员 (Inspector) : Huang Ting 日期(Date) : 10.01.05 10.01.05

焊缝返修位置示意图:

Draft of welding discontinuity:

WELD NUMBER: **SEG029B-009**

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): Gao] 日期(Date): 1.7

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D 为缺陷深度, T 为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;
 2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;
 3. 焊前对修补区域进行VT检测保证缺陷完全被消除;
 4. 将修补区域打磨到与母材或邻近焊缝平齐;
 5. 对焊缝进行UT检测, 检测范围为返修区域以及其两端各延长50mm.
-
1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, "D" is depth of defects, "T" is thickness of metal) to remove all defects;
 2. Follow repair WPS for joint preparation, preheat, and weld deposit;
 3. Verify with VT no defects remain in the weld joint prior to welding;
 4. Grind the repaired area flush with base metal or the adjacent weld;
 5. Perform UT inspection to the weld along with 50mm on each end of the repair area;

工艺: He Xiaolin
Technical engineer

1.7

审核:
Approved by

Lupinghua

日期
Date 1/7/10



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	OBW6	报告编号 Report No.	B-WR9729
合同号 Contract No.:	04-0120F4	部件名称 Items Name	6BW+6AW LONGIT UDINAL	NDT报告编号 Report No.of NDT	B787-UT-10531
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): Gao Jun 日期(Date): 1.7

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-2 G(2F)-Repair WPS-345-FCAW-2 G(2F)-Repair-1	工艺员 technologist	Hexiaolin
返修(碳刨)前预热温度 Preheat temperature before gouging	650	返修的缺陷 Description of discontinuity	1.7 SLAG
焊前处理检查 Inspection before welding	Am	焊前预热温度 Preheat temperature before welding	168°C
最大碳刨深度 Max. depth of gouging	10mm	碳刨总长 Total length of gouging	170mm
焊工 welder <u>048659</u>	焊接类型 welding type <u>SMAW</u>	焊接位置 position <u>2G</u>	
焊接电流 Current <u>150/152</u>	焊接电压 Voltage <u>23/22</u>	焊接速度 Speed <u>106/108</u>	

返修后检查

Inspection After repairing:

外观检查 VT result <u>Am</u>	检验员 Inspector <u>Lijun</u>	日期 Date <u>2010.02.25</u>
NDT复检 NDT result <u>ALL</u>	探伤员 NDT person <u>Terry Xinyi Shan</u>	日期 Date <u>10.02.28</u>

见证:

Witness/Review:

备注:

Remark:

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

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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-000544**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0509**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: 14-Dec-2009**Description of Non-Conformance:**

During a random in-process visual inspection of OBG segment 6BW, the Caltrans Quality Assurance (QA) Inspector observed an excessive root joint opening (12mm) of a complete joint penetration (CJP) weld between the Floor Beam (FB) Flange and Top Flange of the Longitudinal Diaphragm (LD) located at PP41 and W4. Additional information identifying this non-conformance is listed below.

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- 6) The maximum allowable root opening per this approved WPS is 5mm.

Contractor's proposal to correct the problem:

Perform NDT required to verify weld quality and repair as necessary.

Corrective action taken:

Contractor submitted NDT report showing defects discovered in weld after initial NDT inspection and documentation verifying defects were repaired along with subsequent NDT documentation verifying the weld is in conformance with Contract specifications.

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:**

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QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer