

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-000356
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 12-Jul-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0330

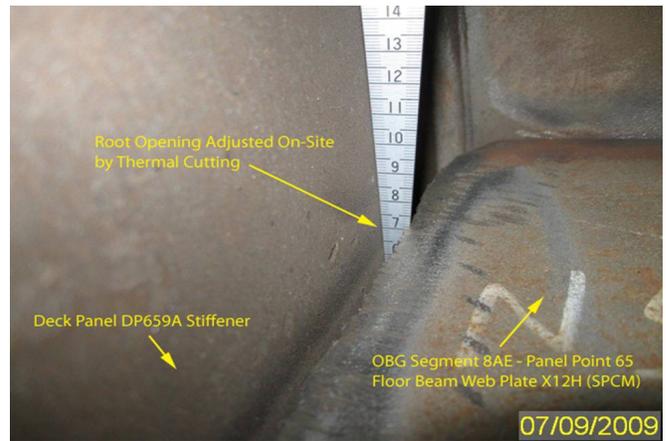
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment 8AE
Procedural	Procedural	Description:	

Reference Description: CA Open Rib Stiffeners on OBG Segment 8AE

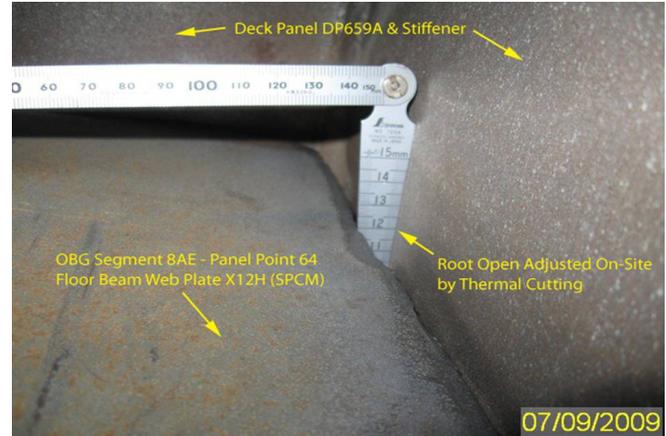
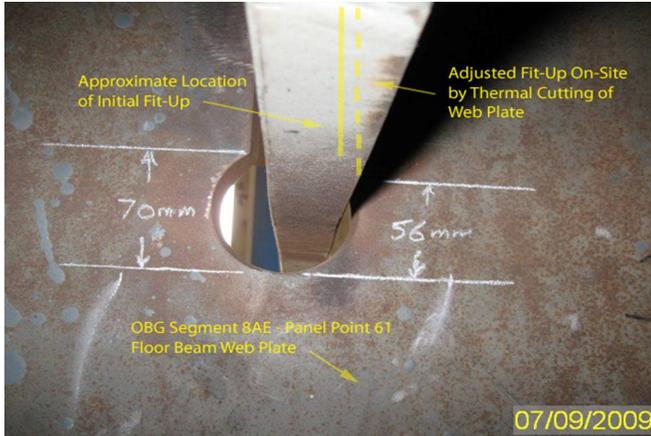
Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed Thermal Cutting of Floor Beam Web Plates to allow fit-up of Panel Stiffeners in OBG Segment designated as 8AE on the Crossbeam side between Panel Points 61 and 64. This process created excessive root openings which will apparently prohibit ZPMC from completing the welding process with the specified fillet welds.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

AWS D1.5 / 2002 – Sections:

3.3.1: “The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5mm (3/16”).”

3.7.4: “Prior approval of the Engineer shall be obtained for repairs to base metal (other than those required by 3.2).”

Who discovered the problem: Rory O’Kane

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1015 hours, Email

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Simonis,Jim

QA Inspector

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: 05-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: 05.03.06-000327

Subject: NCR No. ZPMC-0330

Reference Description: CA Open Rib Stiffeners on OBG Segment 8AE

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:** 08

Remarks:

Caltrans Quality Assurance (QA) Inspector observed Thermal Cutting of Floor Beam Web Plates to allow fit-up of Panel Stiffeners in OBG Segment designated as 8AE on the Crossbeam side between Panel Points 61 and 64. This process created excessive root openings which will apparently prohibit ZPMC from completing the welding process with the specified fillet welds.

Action Required and/or Action Taken:

Submit repair procedure for approval.

Transmitted by: Bill Howe

Attachments: ZPMC-0330

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: 05.03.06-000327

Subject: NCR No. ZPMC-0330

Dated: 24-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000328 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: Prior to performing CJP welding ZPMC/ABF is required to notify the engineer. ZPMC will submit repair reports at a later date to close this NCR.

Gaps greater than 5mm require build up by buttering the plate edge to an acceptable gap or changing the joint configuration to a CJP to a pre-approved procedure. Prior to performing CJP welding ZPMC/ABF is required to notify the engineer. ZPMC will submit repair reports at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000328R00

Caltrans' comments:

Status: AAP

Date: 28-Aug-2009

The response is acceptable, but the Non-Conformance is not closed.

Please provide documentation of the steps taken to minimize the excessive root gap, and provide inspection documentation that the weld is acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0330 at that time.

Submitted by: Wright, Doug

Date: 28-Aug-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000327

Subject: NCR No. ZPMC-0330

Dated: 01-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000328 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing documentation of that the welds are acceptable. Based on this ZPMC requests closure of this NCR.

ZPMC is providing documentation of that the welds are acceptable. Since the writing of the NCR, ZPMC has modified their procedure so that edges can be cut using semi automatic means and reduced the uneven edges that caused the excessive root gaps. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000328R01;

Caltrans' comments:

Status: CLO

Date: 20-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0330 is closed

Submitted by: Ku, Stanley

Attachment(s):

Date: 20-Apr-2010



No. B-558

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-1-7

REGARDING: NCR-000356(ZPMC-0330)

With this letter of response, ZPMC requests closure of CT NCR-000356(ZPMC-0330), what mentioned that QA observed excessive root openings at fillet welds.

ZPMC acknowledged this problem. According to approved procedure, these fillet welds with excessive root opening have been changed into CJP. Rejections found by subsequent have been repaired. Further NDT have been performed to warrant the welds' quality.

With the taken actions, related WRRs & NDT documentation, ZPMC hoping CT could take a review and consider close this NCR.

ATTACHMENT:

NCR-000356(ZPMC-0330)

B-WR7276

B-WR7275

B-WR7274

B-WR7273

B-WR7272

B-WR7271

B-WR7270

B787-UT-8480

B787-UT-8480R1

B787-UT-8480R1-2

[Handwritten signature]
1/7/10

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
333 Burma Road
Oakland CA 94607
Tel: Fax:

Toll Bridge

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 05-Aug-2009

Contract No: 04-0120F4

04-SF-80-13.2 / 13.9

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0330

Document No: 05.03.06-000327

Reference Description: CA Open Rib Stiffeners on OBG Segment 8AE

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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Lift: 08

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Transmitted by: Bill Howe

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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, PRC

Report No: NCR-000356

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 12-Jul-2009

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

NCR #: ZPMC-0330

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description:

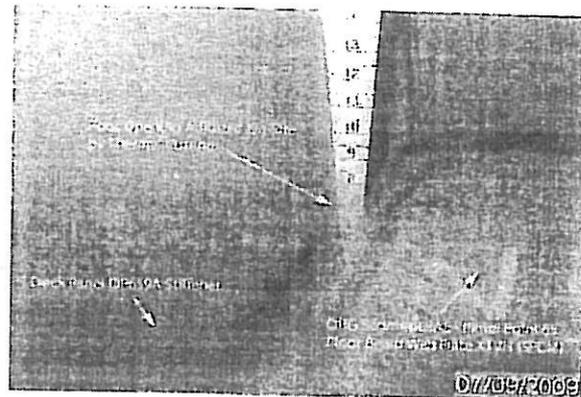
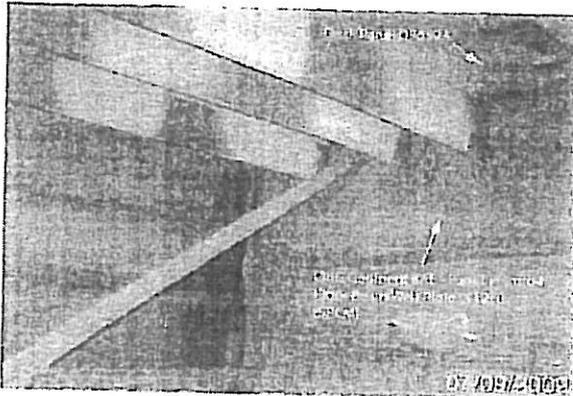
Bridge No: 34-0006

Component: OBG Segment 8AE

Reference Description: CA Open Rib Stiffeners on OBG Segment 8AE

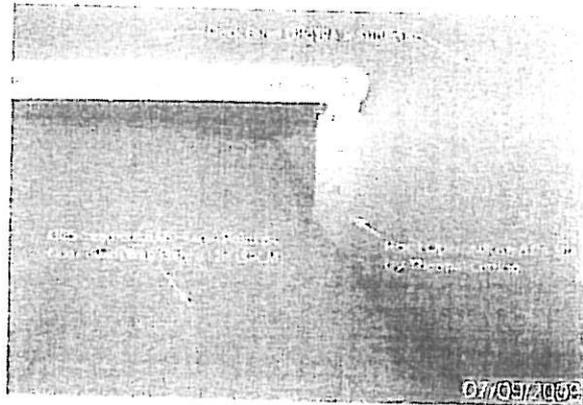
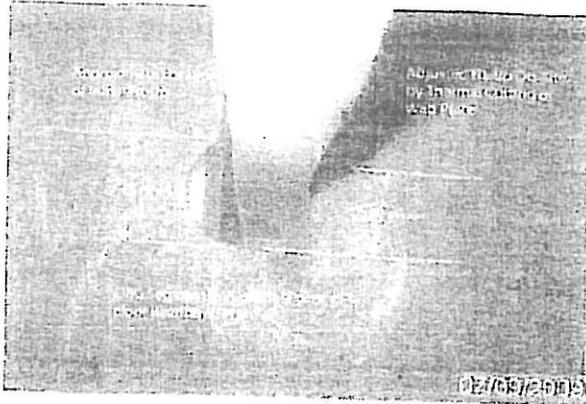
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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Who discovered the problem: Rory O'Kane

Name of individual from Contractor notified: Peter Shaw

Time and method of notification: 1015 hours, Email

Name of Caltrans Engineer notified: Ching Chao

Time and method of notification: 1100 hours, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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,(818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

QA Inspector

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	SEG44	报告编号 Report No.	B-WR7276
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

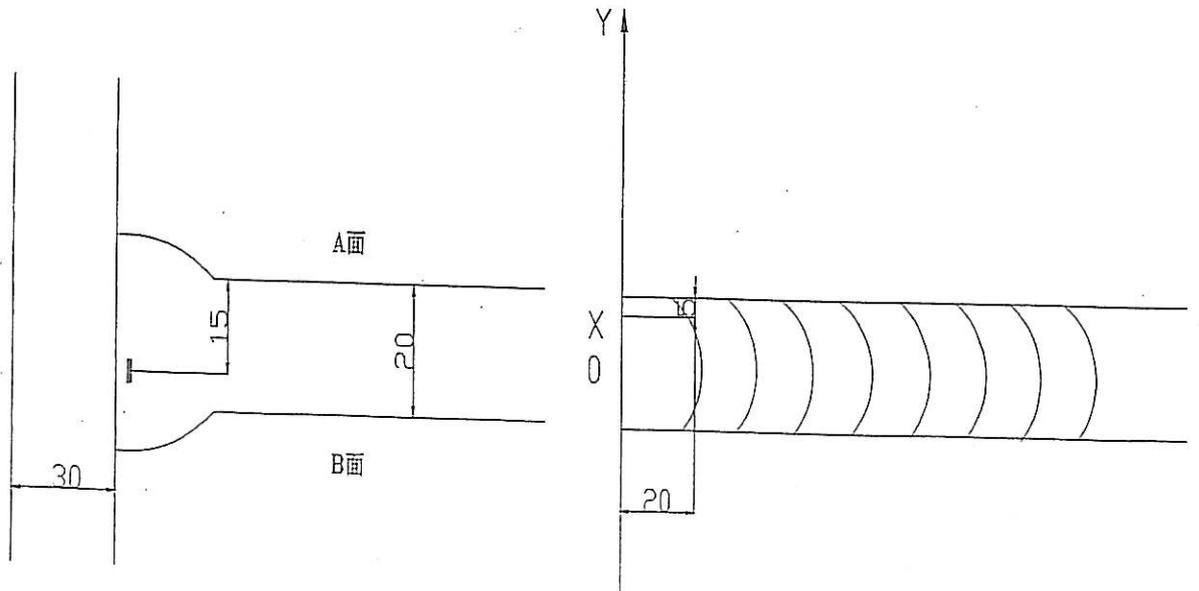
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD18-PP064-140

检验员 (Inspector) Jiang Yong 日期(Date) : 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD18-PP064-140

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 Shiyang* 日期(Date): 09.08.29

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清除;
 4. 将修补区域打磨到与母材或邻近焊缝平齐;
 5. 根据批准的车间图纸检查焊缝.
-
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. Check the welds according to the working drawings.

工艺:
Technical engineer *Ni Tiefang*

审核:
Approved by *Lufankun*

日期
Date 09.08.29



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	SEG44	报告编号 Report No.	B-WR7276
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Niu Tiefang</i> <i>09.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>75</i>	返修的缺陷 Description of discontinuity	<i>IF</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>130</i>
最大碳刨深度 Max. depth of gouging	<i>7</i>	碳刨总长 Total length of gouging	<i>70</i>
焊工 welder	<i>066683</i>	焊接类型 welding type	<i>FCAW</i>
焊接电流 Current	<i>198</i>	焊接电压 Voltage	<i>26.5</i>
		焊接位置 position	<i>36</i>
		焊接速度 Speed	<i>118</i>

返修后检查
Inspection After repairing:

外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>Shuzheny Hal</i> <i>09.07.27</i>	日期 Date	<i>09.12.18</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Li Zhigang</i>	日期 Date	<i>09.07.27</i>

见证:
Witness/Review:备注:
Remark:



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	SEG44	报告编号 Report No.	B-WR7275
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

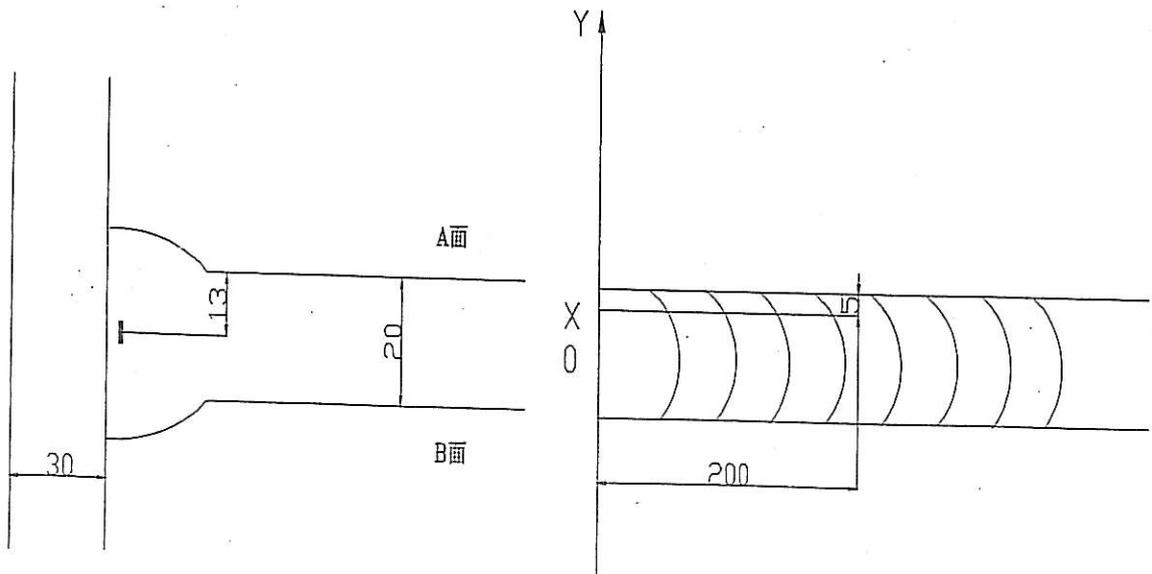
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD18-PP064-146

检验员 (Inspector): Jiang Yong 日期 (Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD18-PP064-146

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 Zhigang 日期(Date): 09.08.29

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. 根据批准的车间图纸检查焊缝.
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. Check the welds according to the working drawings.

工艺:
Technical engineer Min Tiejun

审核:
Approved by [Signature]

日期
Date 09.08.29



焊缝返修报告

Welding Repair Report

版本 Rev. No.

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项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG44	报告编号 Report No.	B-WR7275
合同号 Contract No.:	04-0120F4	部件名称 Items Name	BAE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Niu Tiefang</i> <i>09.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>107℃</i>	返修的缺陷 Description of discontinuity	<i>ZF</i>
焊前处理检查 Inspection before welding	<i>A2</i>	焊前预热温度 Preheat temperature before welding	<i>109℃</i>
最大碳刨深度 Max. depth of gouging	<i>13</i>	碳刨总长 Total length of gouging	<i>250</i>

焊工 welder <i>054013</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position <i>3G</i>
焊接电流 Current <i>149</i>	焊接电压 Voltage <i>25</i>	焊接速度 Speed <i>102</i>

返修后检查
Inspection After repairing:

外观检查 VT result <i>Acl</i>	检验员 Inspector <i>07120201</i> <i>Li Yanhua</i>	日期 Date <i>09.10.08</i>
NDT复检 NDT result <i>Am</i>	探伤员 NDT person <i>[Signature]</i>	日期 Date <i>09.10.15</i>

见证:
Witness/Review:备注:
Remark:



焊缝返修报告

版本 Rev. No

Welding Repair Report

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项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG44	报告编号 Report No.	B-WR7274
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

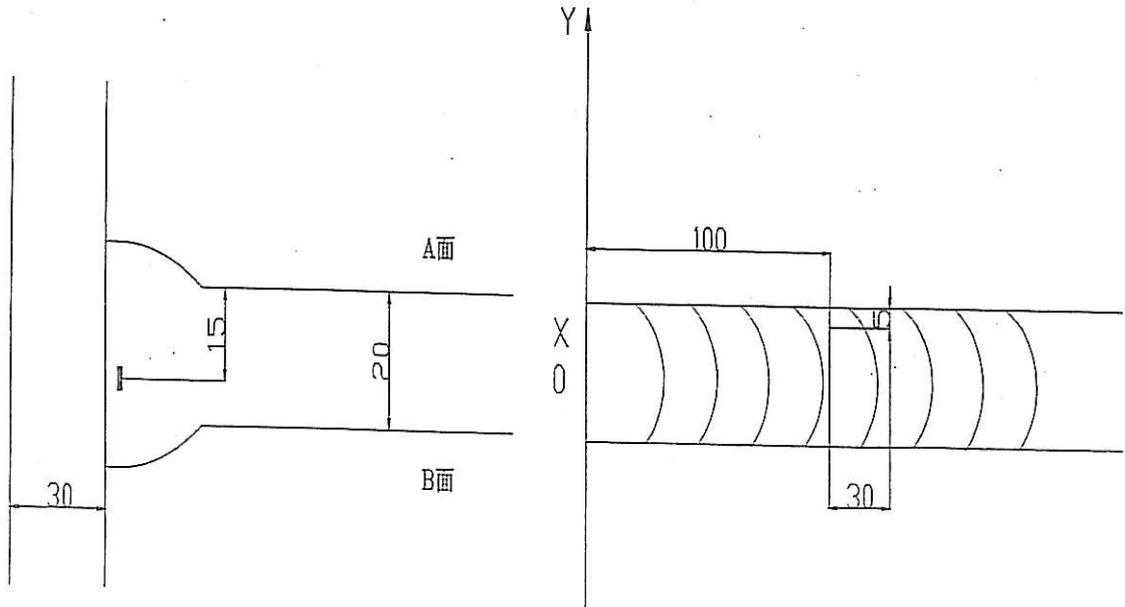
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD18-PP064-150

检验员 (Inspector): Jiang Yong 日期(Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD18-PP064-150

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): *Lishigang* 日期(Date): *07.08.29*

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;
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工艺:
Technical engineer *Niu Tiefang*

审核:
Approved by *Lu Jianhua*

日期
Date *07.08.29*



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	SEG44	报告编号 Report No.	B-WR7274
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No. of NDT	B787-UT-8480
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): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Niu Tiefeng</i> <i>9.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>70</i>	返修的缺陷 Description of discontinuity	<i>IF</i>
焊前处理检查 Inspection before welding	<i>Acu</i>	焊前预热温度 Preheat temperature before welding	<i>125</i>
最大碳刨深度 Max. depth of gouging	<i>7</i>	碳刨总长 Total length of gouging	<i>120</i>
焊工 welder	<i>066683</i>	焊接类型 welding type	<i>FCAW</i>
焊接电流 Current	<i>196</i>	焊接电压 Voltage	<i>26.5</i>
		焊接位置 position	<i>3G</i>
		焊接速度 Speed	<i>118</i>

返修后检查
Inspection After repairing:

外观检查 VT result	<i>Acu</i>	检验员 Inspector	<i>Zhu Zhonghao</i>	日期 Date	<i>09.09.18</i>
NDT复检 NDT result	<i>Acu</i>	探伤员 NDT person	<i>Wang Jun</i>	日期 Date	<i>9.09.10</i>
见证: Witness/Review:					
备注: Remark:					



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	SEG44	报告编号 Report No.	B-WR7273
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

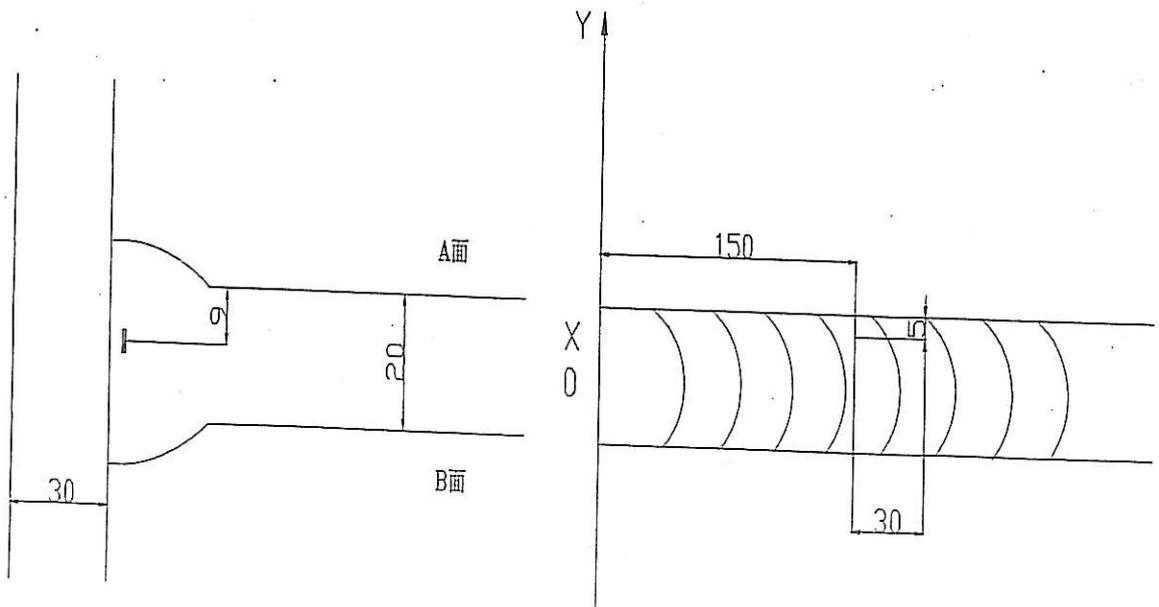
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD17-PP063-137

检验员 (Inspector): Jiang Yong 日期(Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD17-PP063-137

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): *Lizhiyong* 日期(Date): *07.08.29*

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清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 根据批准的车间图纸检查焊缝.

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. Check the welds according to the working drawings.

工艺:
Technical engineer *Nin Tiefen*

审核:
Approved by *Luyanzhens*

日期
Date *07.08.29*



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	SEG44	报告编号 Report No.	B-WR7273
合同号 Contract No.:	04-0120F4	部件名称 Items Name	BAE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Niu Tiefeng</i> <i>09.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>70</i>	返修的缺陷 Description of discontinuity	<i>IF</i>
焊前处理检查 Inspection before welding	<i>Air</i>	焊前预热温度 Preheat temperature before welding	<i>130</i>
最大碳刨深度 Max. depth of gouging	<i>11</i>	碳刨总长 Total length of gouging	<i>130</i>
焊工 welder	<i>066683</i>	焊接类型 welding type	<i>FCW</i>
焊接电流 Current	<i>190</i>	焊接电压 Voltage	<i>26</i>
		焊接位置 position	<i>336</i>
		焊接速度 Speed	<i>118</i>

返修后检查

Inspection After repairing:

外观检查 VT result	<i>Air</i>	检验员 Inspector	<i>Shusky Han</i>	日期 Date	<i>09.09.18</i>
NDT复检 NDT result	<i>Air</i>	探伤员 NDT person	<i>Amang Tan</i>	日期 Date	<i>09.09.18</i>

见证:

Witness/Review:

备注:

Remark:



焊缝返修报告

版本 Rev. No.

Welding Repair Report

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项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG44	报告编号 Report No.	B-WR7272
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

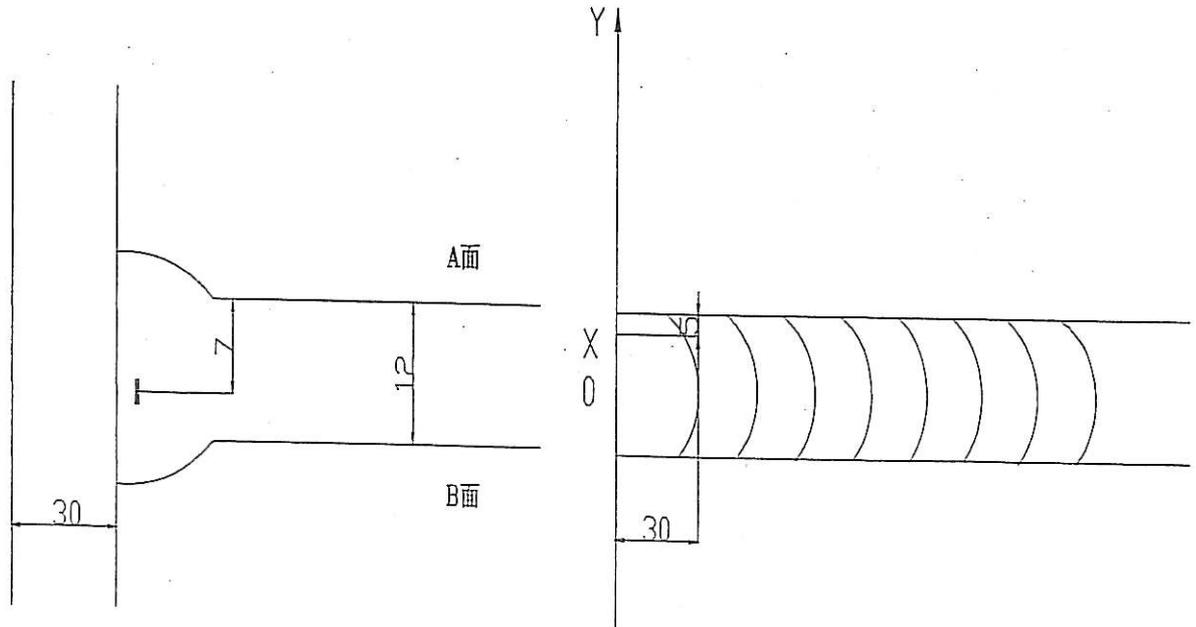
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD24-PP061.5-135

检验员 (Inspector): Jiang Yong 日期(Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD24-PP061.5-135

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 Zhigang* 日期(Date): 09.08.29

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清除;
 4. 将修补区域打磨到与母材或邻近焊缝平齐;
 5. 根据批准的车间图纸检查焊缝.
-
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. Check the welds according to the working drawings.

工艺:
Technical engineer

Nia Tiefen

审核:
Approved by

[Signature]

日期
Date

09.08.29



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	SEG44	报告编号 Report No.	B-WR7272
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Nin T. efaj</i> <i>09.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>95°C</i>	返修的缺陷 Description of discontinuity	<i>IF.</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>103°C</i>
最大碳刨深度 Max. depth of gouging	<i>7</i>	碳刨总长 Total length of gouging	<i>80</i>
焊工 welder	<i>054013</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>149</i>	焊接电压 Voltage	<i>25-</i>
		焊接位置 position	<i>3G</i>
		焊接速度 Speed	<i>107</i>

**返修后检查
Inspection After repairing:**

外观检查 VT result	<i>Acc</i>	检验员 Inspector	<i>07/20701</i> <i>Li Yanhua</i>	日期 Date	<i>09.10.06</i>
NDT复检 NDT result	<i>Acc</i>	探伤员 NDT person	<i>Li Yanhua</i>	日期 Date	<i>09.10.13</i>

见证:
Witness/Review:

备注:
Remark:



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	SEG44	报告编号 Report No.	B-WR7271
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

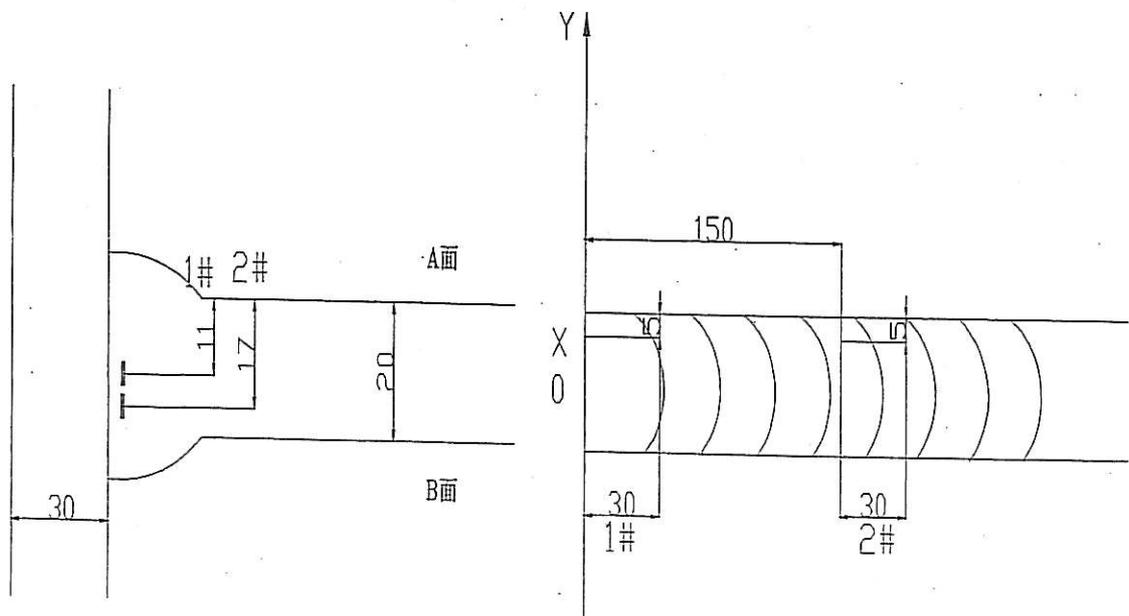
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD15-PP061-143

检验员 (Inspector) Jiang Yong 日期(Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD15-PP061-143

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 Zhigang* 日期(Date): 09.08.29

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清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 根据批准的车间图纸检查焊缝.

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. Check the welds according to the working drawings.

工艺:
Technical engineer

Niu Tiefang

审核:
Approved by

Li Zhigang

日期

Date 09.08.29



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	SEG44	报告编号 Report No.	B-WR7271
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): *Lizhigang* 日期(Date): *09.08.29*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>NM Tiefen</i> <i>09.08.29</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>109℃</i>	返修的缺陷 Description of discontinuity	<i>df</i>
焊前处理检查 Inspection before welding	<i>Acc</i>	焊前预热温度 Preheat temperature before welding	<i>109℃</i>
最大碳刨深度 Max. depth of gouging	<i>5</i>	碳刨总长 Total length of gouging	<i>2/0</i>
焊工 welder <i>054013</i>	焊接类型 welding type <i>SMAW</i>	焊接位置 position <i>3G</i>	
焊接电流 Current <i>150</i>	焊接电压 Voltage <i>25.2</i>	焊接速度 Speed <i>107</i>	

返修后检查
Inspection After repairing:

外观检查 VT result <i>Acc</i>	检验员 Inspector <i>07/20/01</i> <i>Li Yanhua</i>	日期 Date <i>09.10.06</i>
NDT复检 NDT result <i>Acc</i>	探伤员 NDT person <i>Li Yanhua</i>	日期 Date <i>09.10.15</i>

见证:
Witness/Review:备注:
Remark:



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	SEG44	报告编号 Report No.	B-WR7270
合同号 Contract No.:	04-0120F4	部件名称 Items Name	BAE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

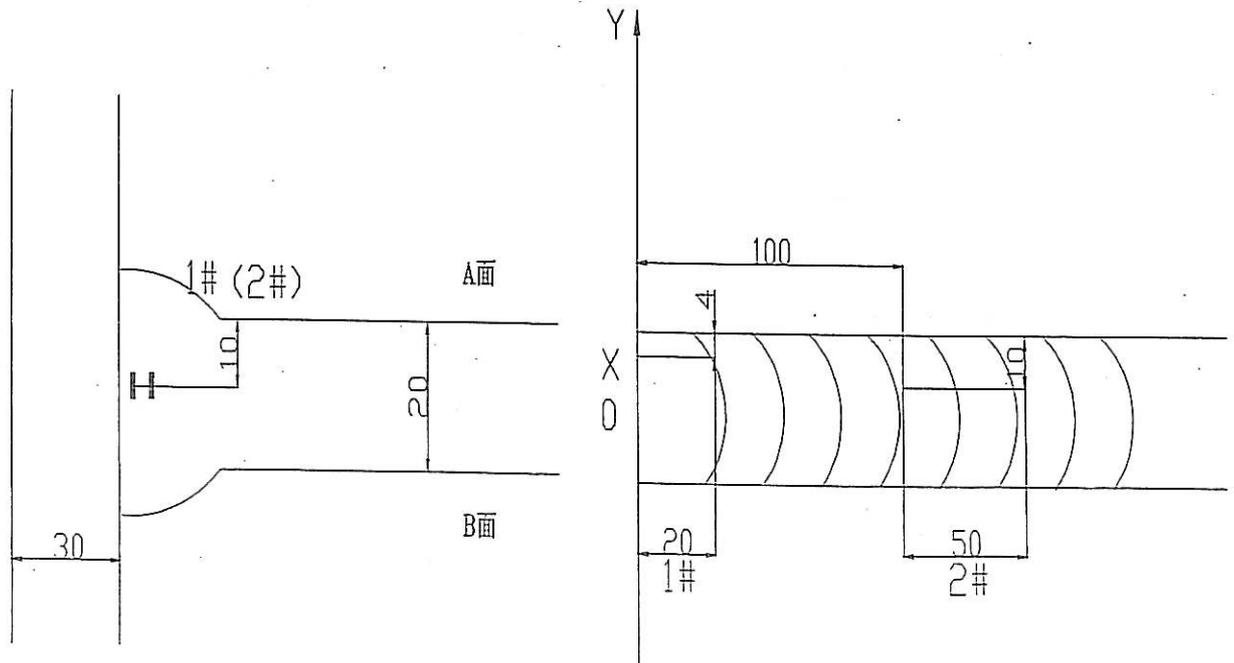
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD15-PP061-135

检验员 (Inspector): Jiang Yong 日期(Date): 09.08.28

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD15-PP061-135

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 Zhiqiang 日期(Date): 09.08.29

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清除;

4. 将修补区域打磨到与母材或邻近焊缝平齐;

5. 根据批准的车间图纸检查焊缝.

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. Check the welds according to the working drawings.

工艺:
Technical engineer

Niu Tiejun

审核:
Approved by Liu Panhui

日期
Date 09.08.29



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	SEG44	报告编号 Report No.	B-WR7270
合同号 Contract No.:	04-0120F4	部件名称 Items Name	8AE FLOOR BEAM SPLICE	NDT报告编号 Report No.of NDT	B787-UT-8480
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): 9.08.29

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<u>W. T. Trefery</u> <u>9.08.29</u>
返修(碳刨)前预热温度 Preheat temperature before gouging	70	返修的缺陷 Description of discontinuity	IF
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	128
最大碳刨深度 Max. depth of gouging	12	碳刨总长 Total length of gouging	220
焊工 welder	066683	焊接类型 welding type	FCAW
焊接电流 Current	197	焊接电压 Voltage	26.3
焊接位置 position		焊接速度 Speed	117
返修后检查 Inspection After repairing:			
外观检查 VT result	Acc	检验员 Inspector	<u>W. T. Trefery</u> <u>09.09.18</u>
NDT复检 NDT result	Acc	探伤员 NDT person	<u>W. T. Trefery</u> <u>09.09.18</u>
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900

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-000657**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 20-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0330**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: 12-Jul-2009**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector observed Thermal Cutting of Floor Beam Web Plates to allow fit-up of Panel Stiffeners in OBG Segment designated as 8AE on the Crossbeam side between Panel Points 61 and 64. This process created excessive root openings which will apparently prohibit ZPMC from completing the welding process with the specified fillet welds.

Contractor's proposal to correct the problem:

Submit documentation for tracking weld type and perform NDT required to verify weld quality.

Corrective action taken:

Contractor has submitted the required documentation for weld type change as well as NDT documentation verifying the CJP welds meet weld quality requirements of AWS D1.5.

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, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim **Quality Assurance Inspector****Reviewed By:** Wahbeh, Mazen **QA Reviewer**