

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



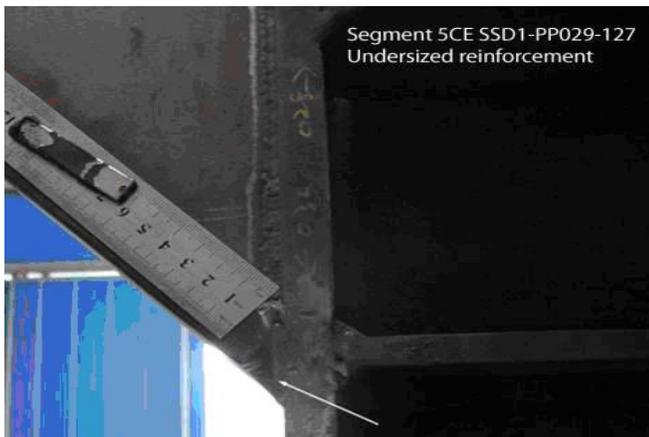
Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-000197**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 09-Sep-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0177**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> OBG SEG 5CE, various SSD joints
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b>	OBG floorbeam sloping flange plate connection

**Reference Description:** Undersized Reinforcement**Description of Non-Conformance:**

QA observed numerous sloping flange plate connections with undersized reinforcement. Weld detail WD20N requires a reinforcing fillet to be 5 millimeters on the acute side, and 8 millimeters on the obtuse side. The following is a list of weld numbers accepted by ZPMC visually and by the required non-destructive testing. SSD19-PP029-131, SSD19-PP029-127, SSD17A-PP021-009, SSD17A-PP021-126, SSD13A-PP036-131, and SSD13A-PP036-127. QA observed several others of the same connection that appears to be completed however it is not clear that ZPMC has completed visual and non destructive testing requirements.

**Applicable reference:**

Weld detail, WD20N on ZPMC shop drawing WD2

**Who discovered the problem:** Quality Assurance Inspector Gregory Bertlesman**Name of individual from Contractor notified:** ABF representative Peter Shaw**Time and method of notification:** 09/9/2008 / verbal notification at 1030 hours**Name of Caltrans Engineer notified:** Ching Chao

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** Email notification at 11:00 on 15-Sep-08

**QC Inspector's Name:** ZPMC QC Inspector 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 Abifhram Velasco, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Velasco,Abifhram	SMR
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<b>Reviewed By:</b>	Velasco,Abifhram	SMR
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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

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

**Date:** 28-Sep-2008

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

**Dear:** Mr. Charles Kanapicki

**Job Name:** SAS Superstructure

**Attention:** Mr. Dave Williams Consultant

**Document No:** 05.03.06-000173

**Subject:** NCR No. ZPMC-0177

**Reference Description:** Undersized Reinforcement

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:** 05

### Remarks:

QA observed numerous sloping flange plate connections with undersized reinforcement. Weld detail WD20N requires a reinforcing fillet to be 5 millimeters on the acute side, and 8 millimeters on the obtuse side. The following is a list of weld numbers accepted by ZPMC visually and by the required non-destructive testing. SSD19-PP029-131, SSD19-PP029-127, SSD17A-PP021-009, SSD17A-PP021-126, SSD13A-PP036-131, and SSD13A-PP036-127. QA observed several others of the same connection that appears to be completed however it is not clear that ZPMC has completed visual and non destructive testing requirements.

Please refer to the attached NCR #ZPMC-0177 for details.

### Action Required and/or Action Taken:

The Contractor is to provide documentation for the necessary repairs for the undersized reinforcement.  
Also propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

**Transmitted by:** Ching Chao

**Attachments:** ZPMC-0177

**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:** 05.03.06-000173

**Subject:** NCR No. ZPMC-0177

**Dated:** 07-Nov-2008

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000178 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ABF and ZPMC came to an agreement on how to inspect the skewed joint for the required reinforcement.

ABF contacted ZPMC QC on this issue when the CT inspector identified the nonconformance. It was agreed that ZPMC was not inspecting this skewed joint correctly. ABF and ZPMC then came to an agreement on how to inspect the skewed joint for the required reinforcement. ZPMC has begun to rework these weld joints by adding reinforcement as required and re-inspecting as originally required.

### Submitted by:

**Attachment(s):** ABF-NPR-000178R00

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### Caltrans' comments:

**Status:** AAP

**Date:** 10-Nov-2008

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

Please provide the VT report documentation confirming that the size and profile of these welds are acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0177 at that time.

**Submitted by:** Wright, Doug

**Date:** 11-Nov-2008

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000173

**Subject:** NCR No. ZPMC-0177

**Dated:** 31-Mar-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000178 **Rev:** 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** Documentation that the welds were subsequently repaired and re-inspected as shown.

As requested by CT attached is documentation that the welds were subsequently repaired and re-inspected as shown on the WRR. ZPMC requests closure of the NCR.

### Submitted by:

**Attachment(s):** ABF-NPR-000178R01;

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### Caltrans' comments:

**Status:** CLO

**Date:** 08-Apr-2009

The proposed resolution is acceptable. Documentation is included that shows the welds were subsequently repaired and re-inspected. The Department concurs that Non-Conformance ZPMC-0177 is closed.

**Submitted by:** Wright, Doug

**Date:** 08-Apr-2009

**Attachment(s):**



# 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	SEG13、SEG25	报告编号 Report No.	B-WR1150
合同号 Contract No.:	04-0120F4	部件名称 Items Name	隔板 Floor Beam	NDT报告编号 Report No.of NDT	
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

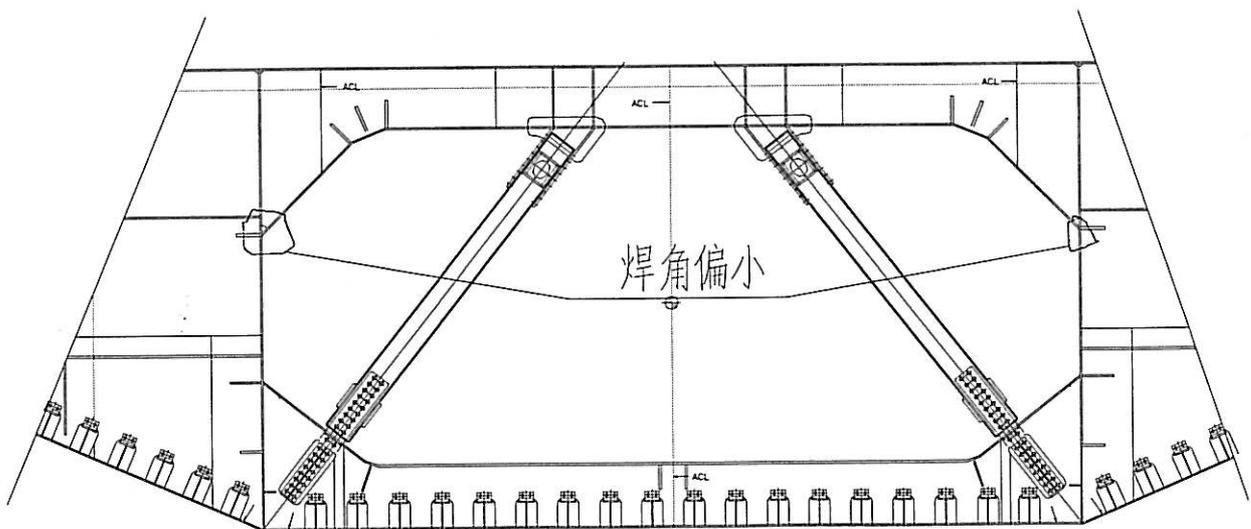
**Description of welding discontinuity:**

检查发现焊缝SSD17-PP021-126\SSD17A-PP021-009\SSD13-PP036-131\SSD13A-PP036-127焊角偏小2-3 mm,具体见下图。

Weld size of SSD17-PP021-126\SSD17A-PP021-009\SSD13-PP036-131\SSD13A-PP036-127 was 2-3mm shorter than technology requirement, the following shows the detail position.

检验员 (Inspector): Shen Fuyou日期(Date): 2008-10-7

焊缝返修位置示意图:

**Draft of welding discontinuity:**

产生原因:

Caused:

1、成型焊缝后，焊缝尺寸在误差范围内，打磨结束后达不到AWS标准的要求。

1. Weld size was in the error range after welding, but it was shorter than AWS requirement after grinding.

车间负责人(Foreman): *zhangyanzhi* 日期(Date): *2008.10.07*  
08.10.07

处理意见

Disposition:

1. 按照图纸要求对焊缝进行修补，焊后将其打磨与母材或邻近焊缝平滑过渡。

1. Continue to weld according to the shop drawing and grind the repaired weld flush with the base metal  
Or adjacent weld smoothly.

工艺:  
Technical engineer *Niu Zhefeng*

审核:  
Approved by *[Signature]*

日期  
Date *2008.10.21*

#R787-QCP-900



# 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.	SEG13、SEG25	报告编号 Report No.	B-WR1150
合同号 Contract No.:	04-0120F4	部件名称 Items Name	隔板 Floor Beam	NDT报告编号 Report No.of NDT	
项目编号 Project No.:	ZP06-787				

纠正措施:

**Correction action to prevent re occurrence:**

- 1、成型焊缝结束后及时测量，然后在进行下道工序。
  - 2、严格按照工艺流程及WPS要求施工。
1. Measure weld size immediately before doing next process;
  2. Perform according to technology procedure and WPS requirement.

*Zhangyanzhi*      2008.10.07

车间负责人(Foreman): zhangyanzhi 日期(Date): 08.10.07

参照的WPS编号 Repair WPS No.	<i>WPS-B-P-214</i> <i>-TC-V4b</i>	工艺员 technologist	<i>Niu. Refay</i> 2008.10.08
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>weld size was shorter than technology require</i>
焊前处理检查 Inspection before welding	<i>ALL</i>	焊前预热温度 Preheat temperature before welding	<i>70°C</i>
最大碳刨深度 Max. depth of gouging	<i>NA</i>	碳刨总长 Total length of gouging	<i>NA</i>
焊工 welder	<i>Feng Huajun</i> <i>066258</i>	焊接类型 welding type	<i>SMAN</i>
焊接电流 Current	<i>160A</i>	焊接电压 Voltage	<i>24V</i>
		焊接位置 position	<i>4G</i>
		焊接速度 Speed	<i>100mm/min</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>ALL</i>	检验员 Inspector	<i>Shen Fuyou</i> <i>0807274</i>
NDT复检 NDT result	<i>ALL</i>	探伤员 NDT person	<i>Ma Jialong</i>
日期 Date		日期 Date	<i>2008.10.10</i>
日期 Date		日期 Date	<i>2008.10.11</i>
见证: Witness/Review:			
备注: Remark:			

#R787-QCP-900

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690 Walnut Ave. St. 150  
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(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-000108**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 11-Nov-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0177**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Date the Non-Conformance Report was written:** 09-Sep-2008**Description of Non-Conformance:**

QA observed numerous sloping flange plate connections with undersized reinforcement. Weld detail WD20N requires a reinforcing fillet to be 5 millimeters on the acute side, and 8 millimeters on the obtuse side. The following is a list of weld numbers accepted by ZPMC visually and by the required non-destructive testing. SSD19-PP029-131, SSD19-PP029-127, SSD17A-PP021-009, SSD17A-PP021-126, SSD13A-PP036-131, and SSD13A-PP036-127. QA observed several others of the same connection that appears to be completed however it is not clear that ZPMC has completed visual and non destructive testing requirements.

**Contractor's proposal to correct the problem:**

The Contractor has recognized the issue and have begun to rework these weld joints by adding reinforcement as required and re-inspecting as originally required.

**Corrective action taken:**

Closed by Construction.

**Did corrective action require Engineer's approval?** Yes No**If so, name of Engineer providing approval:** Stanley Ku and Doug Wright**Date:** 11-Nov-2008**Is Engineer's approval attached?** Yes No Email on file.**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 Sang Le, who represents the Office of Structural Materials for your project.

**Inspected By:** Dautermann, Peter

Quality Assurance Inspector

**Reviewed By:** Dautermann, Peter

QA Reviewer