

**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, China**Report No:** NCR-000771**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0733**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> FB3121A Floorbeam Lift 13E
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Weld Removal on SPCM Welds without Engineer's Approval**Description of Non-Conformance:**

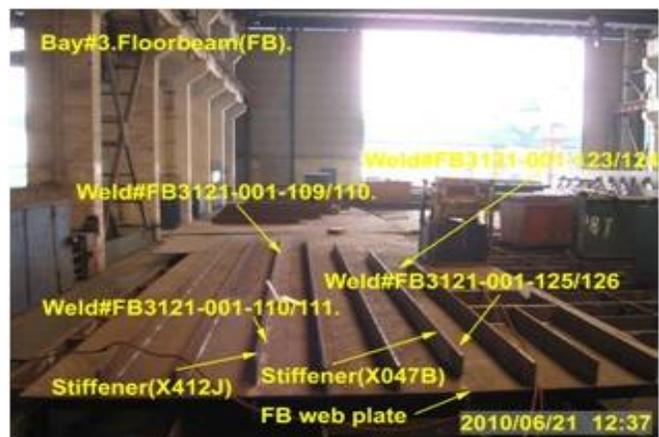
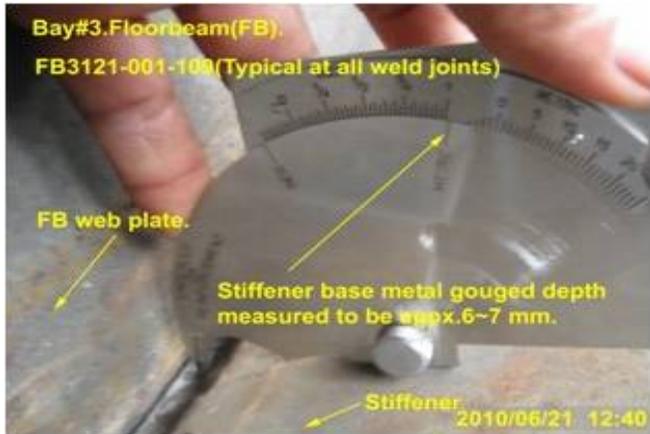
During the Quality Assurance (QA) random in process observations of the fabrication of Orthotropic Box Girder (OBG) Floor beam FB3121A, this QA Inspector discovered the following issues:

- ZPMC removed Seismic Performance Critical Material (SPCM) welds without Engineers approval as required per American Weld Society (AWS) D1.5 2002 section 12.17.3.
- The weld joints are identified as FB3121-001-108, 109, 123 and 124.
- The welds are fillet weld T-joints joining 2 of the stiffeners to the SPCM areas of floor beam FB3121A.
- SPCM web plates are identified as X3406A and X3405A.
- The stiffeners are identified as X3412J and X7047B.
- Additionally this QA Inspector observed ZPMC has refit the two stiffeners and commenced re-welding them to the web plates of this floor beam without properly preparing the weld joints.
- Base metal that was removed from the edges of the stiffeners during the gouging operation has not been repaired and cleaned prior to re-fitting and welding.
- This QA measured the depth of the gouged areas of the edges of the stiffeners to be approximately 6mm.
- OBG FB3121-001 is located in Bay#3.

For further information, please reference the attached pictures.

# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 3 )



## Applicable reference:

AWS D1.5 2002 section 3.2.1; "Surfaces and edges to be welded shall be smooth, uniform and free from fins, tears, cracks, and other discontinuities which would adversely affect the quality or strength of the weld."

AWS D1.5 2002 section 3.2.6\_...Where any air carbon arc gouging or cutting is involved, proper arc gouging procedures shall be used to avoid the retention of carbon deposits and material or dross in the areas which are to be welded. Air carbon arc gouged surfaces shall be ground to bright metal.

AWS D1.5 2002 section 12.17.3\_Repair welding shall be defined as any welding, including removal of weld or base metal in preparation for welding, necessary to correct unacceptable discontinuities in materials or workmanship.

AWS D1.5 Section 12.17.3 Critical Weld Repairs. Except as provided in 12.17.2, all welded repairs shall be considered critical. They include, but not limited to the following:

- (5) Corrections requiring weld removal and rewelding except as provided in 12.17.2 (4).
- (6) All welding to correct errors in fabrication such as improper cutting, punching, drilling, machining, assembly...

Section;12.17.4\_All critical repairs to base metal and welds shall be approved by the Engineer prior to beginning the repair and shall be documented giving details of the type of discontinuity and extent of repair.

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Who discovered the problem:** Surendra Prabhu

**Name of individual from Contractor notified:** Mr.Zhang Wei / Mr.Chen Xi

**Time and method of notification:** 1300 hours, 06/21/10, Verbal

**Name of Caltrans Engineer notified:** Sean Eagen

**Time and method of notification:** 10:15 hours, 06/22/10, Verbal

**QC Inspector's Name:** Mr.Wang Wen Bin and Mr.Jerry Shen

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

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<b>Inspected By:</b>	Devey,Jim	SMR
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<b>Reviewed By:</b>	Wahbeh,Mazen	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:** 24-Jun-2010

**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:** 05.03.06-000729

**Subject:** NCR No. ZPMC-0733

**Reference Description:** Weld Removal on SPCM Welds without Engineer's Approval

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:** 13

**Remarks:**

During the Quality Assurance (QA) random in process observations of the fabrication of Orthotropic Box Girder (OBG) Floor beam FB3121A, this QA Inspector discovered the following issues:

- ZPMC removed Seismic Performance Critical Material (SPCM) welds without Engineers approval as required per American Weld Society (AWS) D1.5 2002 section 12.17.3.
- The weld joints are identified as FB3121-001-108, 109, 123 and 124.
- The welds are fillet weld T-joints joining 2 of the stiffeners to the SPCM areas of floor beam FB3121A.
- SPCM web plates are identified as X3406A and X3405A.
- The stiffeners are identified as X3412J and X7047B.
- Additionally this QA Inspector observed ZPMC has refit the two stiffeners and commenced re-welding them to the web plates of this floor beam without properly preparing the weld joints.
- Base metal that was removed from the edges of the stiffeners during the gouging operation has not been repaired and cleaned prior to re-fitting and welding.
- This QA measured the depth of the gouged areas of the edges of the stiffeners to be approximately 6mm.
- OBG FB3121-001 is located in Bay#3.

For further information, please reference the attached pictures.

**Action Required and/or Action Taken:**

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Sean Eagen Transportation Engineer

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# NCT

( Continued Page 2 of 2 )

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**Attachments:** ZPMC-0733

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

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000729

**Subject:** NCR No. ZPMC-0733

**Dated:** 17-Aug-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000742 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** Please see ZPMC's letter of response. Based on this ZPMC requests closure of the NCR.  
Please see ZPMC's letter of response. Based on this ZPMC requests closure of the NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000742R00;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 23-Aug-2010

The proposed resolution is acceptable. This NCR is considered closed.

**Submitted by:** Woo, Laraine

**Attachment(s):**

**Date:** 23-Aug-2010



No. B-842

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-08-17**

**REGARDING: NCR-000771(ZPMC-0733)**

ZPMC is providing NDT records show the base metal was repaired and was tested to be acceptable. The welding for ribs on this panel has been finished and passed the NDT as shown in attached NDT records. ZPMC QA personnel have instructed the production on the requirement to get the approval of engineer prior to the removal of FCW. Based on this, ZPMC is requesting closure of this NCR.

**ATTACHMENT:**

NCR-000771(ZPMC-0733)

B787-MT-24810

B787-MT-24807

B787-MT-25434

A handwritten signature in black ink, appearing to be 'Jing' followed by a flourish.

8/17/10



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:** 24-Jun-2010

**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:** 05.03.06-000729

**Subject:** NCR No. ZPMC-0733

**Reference Description:** Weld Removal on SPCM Welds without Engineer's Approval

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**Material Location:** OBG

**Lift:** 13

### Remarks:

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- OBG FB3121-001 is located in Bay#3.

For further information, please reference the attached pictures.

### Action Required and/or Action Taken:

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**Transmitted by:** Sean Eagen Transportation Engineer

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## NCT

( Continued Page 2 of 2 )

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**Attachments:** ZPMC-0733

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

**File:** 05.03.06

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, China**Report No:** NCR-000771**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Jun-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0733**Type of problem:**Welding  Concrete  Other Welding  Curing  Procedural  **Bridge No:** 34-0006Joint fit-up  Coating  Other  **Component:** FB3121A Floorbeam Lift 13EProcedural  Procedural  **Description:****Reference Description:** Weld Removal on SPCM Welds without Engineer's Approval**Description of Non-Conformance:**

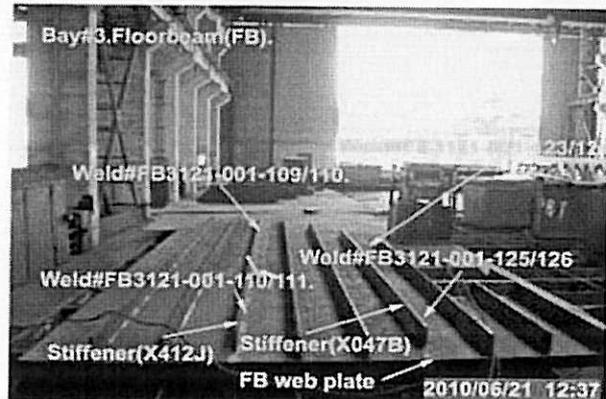
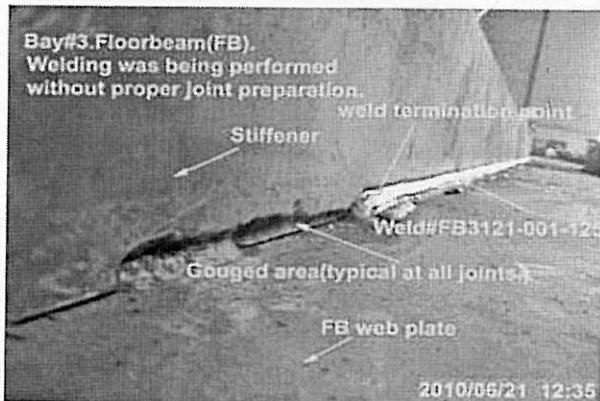
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- OBG FB3121-001 is located in Bay#3.

For further information, please reference the attached pictures.

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 3)



### Applicable reference:

AWS D1.5 2002 section 3.2.1; "Surfaces and edges to be welded shall be smooth, uniform and free from fins, tears, cracks, and other discontinuities which would adversely affect the quality or strength of the weld."

AWS D1.5 2002 section 3.2.6...Where any air carbon arc gouging or cutting is involved, proper arc gouging procedures shall be used to avoid the retention of carbon deposits and material or dross in the areas which are to be welded. Air carbon arc gouged surfaces shall be ground to bright metal.

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 3 of 3 )

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**Name of individual from Contractor notified:** Mr.Zhang Wei / Mr.Chen Xi

**Time and method of notification:** 1300 hours, 06/21/10, Verbal

**Name of Caltrans Engineer notified:** Sean Eagen

**Time and method of notification:** 10:15 hours, 06/22/10, Verbal

**QC Inspector's Name:** Mr.Wang Wen Bin and Mr.Jerry Shen

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

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<b>Inspected By:</b>	Devey,Jim	SMR
<b>Reviewed By:</b>	Wahbeh,Mazen	SMR

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# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-24807      DATE日期 2010.07.10      PAGE OF页码 1/1      Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: FB3108/FB3121 FLOOR BEAM		CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4	
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	NA  22/100mm
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	NA

WELD I.D. 焊缝编号	DISCONTINUITY 不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
X3414D				ACC.		100%MT
X3411J				ACC.		100%MT
X3411H				ACC.		100%MT
X3411K				ACC.		100%MT
X3411F				ACC.		100%MT
X7047B				ACC.		100%MT
X3412A				ACC.		100%MT

Base metal per B-CWR1672

BLANK

EXAMINED BY 主探 Sun Gongchang LEVEL - II SIGN 签名 / DATE日期 2010.07.10 质量经理 / QCM	REVIEWED BY 审核 Ding A cheng LEVEL-II SIGN / DATE日期 2010.07.10 用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-25434		DATE日期 2010.07.29	PAGE OF页码 1/4	Revision No: 0
PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS		
DRAWING NO. 图号: FB3121 13th lifting floor beam		CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4		
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010	
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620	
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC	
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm	
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345T2/F2-X 20/22/25mm	
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT	

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
FB3121-001-133				ACC.		100%MT
FB3121-001-134				ACC.		100%MT
FB3121-001-135				ACC.		50%MT
FB3121-001-136				ACC.		50%MT
FB3121-001-137						*
FB3121-001-138						*
FB3121-001-139						*
FB3121-001-140						*
FB3121-001-141				ACC.		50%MT
FB3121-001-142				ACC.		50%MT
FB3121-001-143				ACC.		100%MT
FB3121-001-144				ACC.		100%MT

\* FB3121-001-133, FB3121-001-134, FB3121-001-135, FB3121-001-136, FB3121-001-141, FB3121-001-142, FB3121-001-143, FB3121-001-144 were MT inspection and ACC, which is the result of required 25% MT.

\* FB3121-001-133, FB3121-001-134, FB3121-001-135, FB3121-001-136, FB3121-001-141, FB3121-001-142, FB3121-001-143, FB3121-

EXAMINED BY 主探 Jin Jianting <i>Jin Jianting</i> 12.07.29	REVIEWED BY 审核 <i>Fu Zhigang</i>
LEVEL - II SIGN 签名 / DATE日期	LEVEL-II SIGN / DATE日期 12.07.29
质量经理 / QCM	用户 CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-25434		DATE日期 2010.07.29		PAGE OF页码 2/4	Revision No: 0	
PROJECT NO. 工程编号: ZP06-787			CONTRACTOR: 用户: CALTRANS			
DRAWING NO. 图号: FB3121 13th lifting floor beam			CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4			
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010			
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620			
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC			
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm			
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度	A709M-345T2/F2-X  20/22/25mm			
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT			
WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
001-144焊缝经MT检测合格, 累积检测长度已经达到了此批要求的25%检测长度。						
FB3121-001-145				ACC.		100%MT
FB3121-001-146				ACC.		50%MT
FB3121-001-147				ACC.		50%MT
FB3121-001-121				ACC.		50%MT
FB3121-001-122				ACC.		100%MT
FB3121-001-123				ACC.		100%MT
FB3121-001-124				ACC.		100%MT
FB3121-001-125				ACC.		50%MT
FB3121-001-126				ACC.		50%MT
FB3121-001-127				ACC.		100%MT
FB3121-001-128				ACC.		100%MT
FB3121-001-129				ACC.		100%MT
FB3121-001-130				ACC.		50%MT
EXAMINED BY主探 Jin Jianting <i>Jin Jianting</i> 10.07.29			REVIEWED BY审核 <i>Fu zhiqiang</i>			
LEVEL - II SIGN 签名 / DATE日期			LEVEL-II SIGN DATE日期 10.07.29			
质量经理 / QCM			用户CUSTOMER			
签字 SIGN / 日期 DATE			签字 SIGN / 日期 DATE			



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-25434		DATE日期 2010.07.29	PAGE OF页码 3/4	Revision No: 0
PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS		
DRAWING NO. 图号: FB3121 13th lifting floor beam		CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4		
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010	
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620	
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC	
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm	
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材,厚度	A709M-345T2/F2-X  20/22/25mm	
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT	

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
FB3121-001-131				ACC.		50%MT
FB3121-001-132				ACC.		100%MT
FB3121-001-109				ACC.		100%MT
FB3121-001-110				ACC.		50%MT
FB3121-001-111				ACC.		50%MT
FB3121-001-112				ACC.		100%MT
FB3121-001-113				ACC.		100%MT
FB3121-001-114				ACC.		100%MT
FB3121-001-115				ACC.		50%MT
FB3121-001-116				ACC.		50%MT
FB3121-001-117				ACC.		100%MT
FB3121-001-118				ACC.		100%MT
FB3121-001-119				ACC.		100%MT
FB3121-001-120				ACC.		50%MT

EXAMINED BY主探 Jin Jianting <i>Jin Jianting</i> 10.07.29	REVIEWED BY审核 <i>Zu Shigang</i>
LEVEL - II SIGN 签名 / DATE日期	LEVEL-II SIGN / DATE日期 10.07.29
质量经理 / QCM	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-25434		DATE日期 2010.07.29		PAGE OF页码 4/4	Revision No: 0	
PROJECT NO. 工程编号: ZP06-787			CONTRACTOR: 用户: CALTRANS			
DRAWING NO. 图号: FB3121 13th lifting floor beam			CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4			
REFERENCING CODE 参考规范编码 AWS D1.5-2002	ACCEPTANCE STANDARD 接受标准 AWS D1.5-2002	PROCEDURE NO. 程序编号 ZPQC-MT-01	CALIBRATION DUE DATE 仪器校正有效期 Dec. 28 <sup>ST</sup> , 2010			
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARKER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 5395 5617 5620			
MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC			
PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm			
MATERIAL TO BE EXAMINED 检测材料	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材,厚度	A709M-345T2/F2-X 20/22/25mm			
WELDING PROCESS 焊接方法	FCAW	TYPE OF JOINT 焊缝类型	T-JOINT			
WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
FB3121-001-097				ACC.		100%MT
FB3121-001-098				ACC.		100%MT
FB3121-001-099				ACC.		100%MT
FB3121-001-100				ACC.		50%MT
FB3121-001-101				ACC.		50%MT
FB3121-001-102				ACC.		100%MT
FB3121-001-103				ACC.		100%MT
FB3121-001-104				ACC.		100%MT
FB3121-001-105				ACC.		50%MT
FB3121-001-106				ACC.		50%MT
FB3121-001-107				ACC.		100%MT
FB3121-001-108				ACC.		100%MT
AFTER HSR1 (B) -8613						
BLANK						
EXAMINED BY主探 Jin Jianting <i>Jin Jianting</i> 10.07.29				REVIEWED BY审核 <i>Zou Zhigang</i>		
LEVEL - II SIGN 签名 / DATE日期				LEVEL-II SIGN / DATE日期		
质量经理 / QCM				用户CUSTOMER		
签字 SIGN / 日期 DATE				签字 SIGN / 日期 DATE		

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, China**Report No:** NCS-000729**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Aug-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0733**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>Descriptor:</b>	

**Date the Non-Conformance Report was written:** 21-Jun-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in process observations of the fabrication of Orthotropic Box Girder (OBG) Floor beam FB3121A, this QA Inspector discovered the following issues:

- ZPMC removed Seismic Performance Critical Material (SPCM) welds without Engineers approval as required per American Weld Society (AWS) D1.5 2002 section 12.17.3.
- The weld joints are identified as FB3121-001-108, 109, 123 and 124.
- The welds are fillet weld T-joints joining 2 of the stiffeners to the SPCM areas of floor beam FB3121A.
- SPCM web plates are identified as X3406A and X3405A.
- The stiffeners are identified as X3412J and X7047B.
- Additionally this QA Inspector observed ZPMC has refit the two stiffeners and commenced re-welding them to the web plates of this floor beam without properly preparing the weld joints.
- Base metal that was removed from the edges of the stiffeners during the gouging operation has not been repaired and cleaned prior to re-fitting and welding.
- This QA measured the depth of the gouged areas of the edges of the stiffeners to be approximately 6mm.
- OBG FB3121-001 is located in Bay#3.

For further information, please reference the attached pictures.

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

Perform repairs and subsequent NDT required to verify material quality.

**Corrective action taken:**

Contractor submitted post repair NDT verifying base metal repairs and replacement welds meet Contract weld quality requirements.

**Did corrective action require Engineer's approval?**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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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.

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**Inspected By:**    Simonis,Jim

Quality Assurance Inspector

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**Reviewed By:**    Wahbeh,Mazen

QA Reviewer