

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



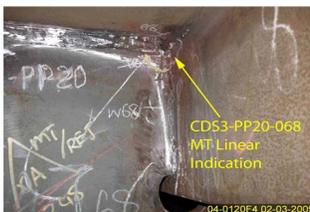
Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-000228**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Feb-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0203**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 Segment 3AW
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	SSD11A-PP21-142, 143 & CSD3-PP20-066,067,068, 070

**Reference Description:** Various MT indications found at final inspection**Description of Non-Conformance:**

ZPMC/ABF requested METS QA for final inspection on Jan. 31, 2009 for the "segment green tag" welds. During random verification Magnetic Particle Testing (MT) of corner beam assembly welds # SSD11A-PP21-142, SSD11A-PP21-143, CSD3-PP20-066, CSD3-PP20-067, CSD3-PP20-068 and CSD3-PP20-070, Caltrans Quality Assurance (QA) Inspectors discovered linear indications in each of these welds. ZPMC claimed that they have performed 100% MT testing with support recording documentation.

**Applicable reference:**

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Who discovered the problem:** Steven Hall & Dhanasingh Sukanthan  
**Name of individual from Contractor notified:** Mr. Art Peterson  
**Time and method of notification:** Feb. 3, 2009, 1400 hours, verbal in person  
**Name of Caltrans Engineer notified:** Mr. Stanley Ku  
**Time and method of notification:** Feb. 4, 2009, 1230 hours, verbal in person  
**QC Inspector's Name:** Mr. Li Yan Hua  
**Was QC Inspector aware of the problem:** Yes No  
**Contractor's proposal to correct the problem:**

Not available.

**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.

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<b>Inspected By:</b>	Tsang, Eric	SMR
<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:** 12-Feb-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 Manager - OBG

**Document No:** 05.03.06-000196

**Subject:** NCR No. ZPMC-0203

**Reference Description:** Various MT indications found at final inspection

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:**

### Remarks:

ZPMC/ABF requested METS QA for final inspection on Jan. 31, 2009 for the "segment green tag" welds. During random verification Magnetic Particle Testing (MT) of corner beam assembly welds # SSD11A-PP21-142, SSD11A-PP21-143, CSD3-PP20-066, CSD3-PP20-067, CSD3-PP20-068 and CSD3-PP20-070, Caltrans Quality Assurance (QA) Inspectors discovered linear indications in each of these welds. ZPMC claimed that they have performed 100% MT testing with support recording documentation.

### Action Required and/or Action Taken:

This is a recurring QC issue. Please provide a resolution of this issue within 14 days.

**Transmitted by:** Stanley Ku Sr. Bridge Engineer

**Attachments:** ZPMC-0203

**cc:** Rick Morrow, Gary Pursell, Brian Boal, Jason Tom

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000196

**Subject:** NCR No. ZPMC-0203

**Dated:** 11-Mar-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000201 **Rev:** 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** Indication were not detected during final inspection. ABFJV has conducted documented training with ZPMC CWI and MT inspectors based on procedural requirements as well as review of this NCR.

Indication were not detected during final inspection. ABFJV has conducted documented training with ZPMC CWI and MT inspectors based on procedural requirements as well as review of this NCR. With the attachment data, ZPMC requests closure of NCR ZPMC-0203.

### Submitted by:

**Attachment(s):** ABF-NPR-000201R00;

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### Caltrans' comments:

**Status:** AAP

**Date:** 17-Mar-2009

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

Please provide documentation of the weld repairs that were performed and that the repairs were acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0203 at that time.

**Submitted by:** Wright, Doug

**Date:** 17-Mar-2009

**Attachment(s):**

# Tool Box Training

Subject:

CWI and MT inspector training, CT NCR's ZPMC-0123,  
ZPMC-0162, ZPMC -0145, ZPMC-0204, ZPMC-0205,  
ZPMC-0206, ZPMC-0207

Date:

Mar. 10th. 2009

Conducted By:

Steve Lawton

Name	Title
Xu Xiangping	CWI
Zhang Zhong Wang/Nam	}
Gousses Luan Zhaoqiang & Jia Jia	
Li Zhijiang	
Wan Wenzhong	
Zhao Chen Sun	
Zhang Zhixun	
Li Jianhua	

# Tool Box Training Agenda

**Subject:** CWI responsibilities

**Reason for Training:** Several NCR's relating to CWI responsibility, where it appears the CWI is not completely aware of all duties expected of a CWI

**Reference:** NCR's, ZPMC-0123, ZPMC-0145, ZPMC-0162, ZPMC-0202, ZPMC-0204, ZPMC-0205

1. **AWS D1.5-2002 Section 6 Responsibilities of QC Inspector**
  - a. 6.2 Inspection of Materials
  - b. 6.3 Inspection of WPS Qualification and Equipment
  - c. 6.4 Inspection of Welder, Welding Operator and Tack Welder Qualifications
  - d. 6.5 Inspection of Work and Records
2. **Time of Inspection**
  - a. Fit-up
  - b. inprocess
  - c. Final
3. **AWS D1.5-02 Section 3**
  - a. 3.2 Preparation of Base Material
  - b. 3.3 Assembly
  - c. 3.4 Control of Distortion and Shrinkage
  - d. 3.6 Weld Profiles
  - e. 3.7 Repairs



# Tool Box Training Agenda

**Subject:** MT of welds

**Reason for Training:** Several CT NCR's relating to welds accepted by MT by ZPMC then later found to be unacceptable by CT QA inspection.

**Reference:** CT NCR's ZPMC-0203, ZPMC-0204, ZPMC-0034, ZPMC-0035, ZPMC-0077, ZPMC-0191, ZPMC-0192, ZPMC-0194,

1. **MT Techniques**
  - a. Equipment
  - b. Pie Gage
  - c. Powder
  
2. **Inspection Techniques**
  - a. Lighting
  - b. Position of body (distance of eyes to the weld surface)
  - c. Speed
  - d. Amount of Powder
  
3. **Inspection Criteria**
  - a. ZPMC Inspection procedures
  - b. Relevant Versus Non Relevant indications

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000196

**Subject:** NCR No. ZPMC-0203

**Dated:** 31-Mar-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000201 **Rev:** 01

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**Contractor's Proposed Resolution:**

**Reference Resolution:** As requested by CT ZPMC is attaching all subsequent repair and inspection documentation.  
ZPMC requests closure of this NCR.

**Submitted by:**

**Attachment(s):** ABF-NPR-000201R01;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 13-Apr-2009

The proposed resolution is acceptable. The welding repair report for the repair is included, and the welds in question after the repair have been accepted by MT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0203 is closed.

**Submitted by:** Wright, Doug

**Date:** 13-Apr-2009

**Attachment(s):**



关键焊缝返修报告  
Critical Welding Repair Report (CWR)

版本  
Rev. No.:

0

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG013	报告编号 Report No.:	B-CWR294
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	3A角单元 3A Corner Assembly	NDT 报告编号 NDT Report No.:	B787- <del>AT</del> -7014
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

A 40mm long longitudinal crack was detected by MT in Weld Number SSD11A-PP021-142.

A 45mm long longitudinal crack was detected by MT in Weld Number SSD11A-PP021-143.

See the Draft below for the crack locations.

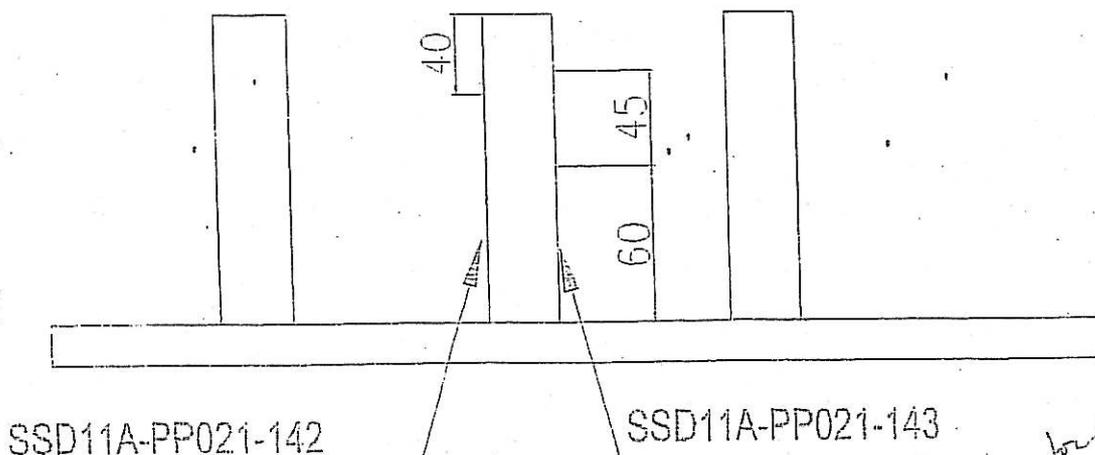
在焊缝SSD11A-PP021-142MT检测出一条纵向裂纹, 长度为40mm, 在SSD11A-PP021-143上发现另外一条纵向裂纹, 长度为5mm, 具体位置见下图。

检验员 (Inspector): Zhang Xiaoming

日期 (Date): 2009.01.29

焊缝返修位置示意图:

Draft of Welding Discontinuity:



<input checked="" type="checkbox"/>	APPROVED
<input type="checkbox"/>	REVISION
<input type="checkbox"/>	INSPECTION
<input type="checkbox"/>	WELDING
<input type="checkbox"/>	CONSTRUCTION
<input type="checkbox"/>	OPERATION
<input type="checkbox"/>	MAINTENANCE
<input type="checkbox"/>	SAFETY
<input type="checkbox"/>	QUALITY
<input type="checkbox"/>	ENVIRONMENT
<input type="checkbox"/>	HEALTH
<input type="checkbox"/>	WELFARE

*Chang Kuo for  
Steel Lawton  
FQA Manager  
2009-1-29*

产生原因:

Cause:

返修烧焊前, 预热温度不均, 构件中的水汽没有烘干净, 造成裂纹

Insufficient preheat, which was not adequate to remove the moisture on the component prior to repair welding, caused the cracks.

车间负责人 (Foreman) *Lizhigang*

日期 (Date): 2009.02.03

处理意见

Disposition:

1. 安排一个有经验的CWI监控所有焊缝的返修;
2. 按照构件板厚推荐的温度进行预热, QC必须确认;
3. 采用碳刨及打磨的方式将裂纹刨除;
4. 准备一个正确的接头形式, 具体参见相关的返修WPS;
5. VT与MT检测, 确保焊缝中所有的缺陷已经去除;
6. 根据返修的焊接返修工艺规程 (WPS) 进行预热及焊接;
7. 将修补焊缝打磨至与周围母材平滑过渡;
8. 焊角尺寸要满足图纸的制造尺寸;
9. 返修后, 焊缝做VT, MT检测。

1. An experienced CWI shall monitor all repairs.
2. Preheat according to the recommended temperature for component thickness. QC shall verify.
3. Remove the defects by means of gouging and grinding.
4. Prepare a bevel joint according to relevant WPS.
5. Perform VT and MT to ensure all defects have been removed prior to repair welding.
6. Preheat and weld according to the relevant WPS.
7. Grind the repair areas to blend into the adjacent base and weld metal.
8. Confirm the completed fillet weld size is in accordance with the fabrication drawings.
9. Perform VT, MT and UT on the completed repair areas.

工艺: *[Signature]* 审核: *[Signature]*  
Technical Engineer: *[Signature]* Approved By: *[Signature]*

<input checked="" type="checkbox"/>	APPROVED
<input type="checkbox"/>	DEFECTS NOTED
<i>[Signature]</i>	DATE: 2009.02.03
<i>[Signature]</i>	DATE: 02
on the specifications	
State of California	
DEPARTMENT OF TRANSPORTATION	
Division of Engineering Services	
Office of Structure Construction	



# 关键焊缝返修报告

## Critical Welding Repair Report (CWR)

版本  
Rev. No.:  
①

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	SEG013	报告编号 Report No.:	B-CWR294
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	3A角单元 3A Corner Assembly	NDT 报告编号 NDT Report No.:	B787-MT-7014
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

1. 整个返修过程中, QC确认预热温度必须保持最低的预热温度以上。
  2. 返修时, 换用更好的QC监控。
1. QC shall verify the minimum preheat temperature is maintained during the entire repair welding operation.
2. Better QC oversight during repair welding operations.

车间负责人 (Foreman): *Lizhigang*      日期 (Date): *2009.02.03*

参照的WPS编号 Repair WPS No.:	WPS-345+465-SM AW-3G(3F)-Repair	工艺员 Technologist:	<i>Nin Trefing</i> <i>09.02.03</i>
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	<i>138°C</i>	返修的缺陷 Description of Discontinuity:	<i>裂纹</i>
焊前处理检查 Inspection Before Welding:	<i>Acc</i>	焊前预热温度 Preheat Temperature Before Welding:	<i>210°C</i>
最大碳刨深度 Max. Depth of Gouge:	<i>7mm</i>	碳刨总长 Total Length of Gouge:	<i>120mm</i>
焊工 Welder:	<i>Yuncheng Xie</i> <i>045138</i>	焊接类型 Welding Type:	<i>3G SMAW</i>
焊接电流 Current:	<i>175A</i>	焊接电压 Voltage:	<i>24V</i>
		焊接位置 Position:	<i>3G</i>
		焊接速度 Speed:	<i>129mm/min</i>

返修后检查  
Inspection After Repair:

外观检查 VT Result:	<i>Acc</i>	检验员 Inspector:	<i>Li Yanhua</i>	日期 Date:	<i>09.02.04</i>
NDT复验 NDT Result:	<i>MT Acc</i>	探伤员 NDT Person:	<i>Carl X...</i>	日期	<i>09.02.05</i>

见证:  
Witness/Review:

备注:  
Remarks:

APPROVED  
APPROVED AS NOTED  
 RETURNED FOR CORRECTION Pursuant to Section 5-1.02 of the Standard Specifications  
State of California  
DEPARTMENT OF TRANSPORTATION  
Division of Engineering Services  
Office of Structural Construction  
*2/4/09*





# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-6966      DATE日期 2009.01.27      PAGE OF页码 1/3      Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: CA001(WEST) OBG PLATE PANEL SPLICE		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> , 2009
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-X, A709M-345F2-X  22/36/32/24 mm
WELDING PROCESS 焊接方法	SMAW/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			
CSD3-PP020-063				ACC.		100%MT
CSD3-PP020-064				ACC.		100%MT
CSD3-PP020-065				ACC.		100%MT
CSD3-PP020-066				ACC.		100%MT
CSD3-PP020-067				ACC.		100%MT
CSD3-PP020-068				ACC.		100%MT
CSD3-PP020-069				ACC.		100%MT
CSD3-PP020-070				ACC.		100%MT
CSD3-PP020-071				ACC.		100%MT
CSD3-PP020-072				ACC.		100%MT
CSD3-PP020-073				ACC.		100%MT
CSD3-PP020-074				ACC.		100%MT
CSD3-PP020-087				ACC.		100%MT
CSD3-PP020-088				ACC.		100%MT
CSD3-PP020-091				ACC.		100%MT
CSD3-PP020-092				ACC.		100%MT

EXAMINED BY主探  <i>Xu Bing</i>	REVIEWED BY 审核  <i>Wang Wei</i>
LEVEL - II SIGN 签名 / DATE日期 <i>09.01.27</i>	LEVEL-II SIGN / DATE日期 <i>09.1.27</i>
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-6966      DATE日期 2009.01.27      PAGE OF页码 2/3      Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: CA001(WEST) OBG PLATE PANEL SPLICE		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> , 2009
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-X, A709M-345F2-X  22/36/32/24 mm
WELDING PROCESS 焊接方法	SMAW/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			
CSD3-PP020-140				ACC.		100%MT
CSD3-PP020-141				ACC.		100%MT
CSD3-PP020-142				ACC.		100%MT
CSD3-PP020-143				ACC.		100%MT
CSD3-PP020-108				ACC.		100%MT
CSD3-PP020-109				ACC.		100%MT
CSD3-PP020-110				ACC.		100%MT
CSD3-PP020-111				ACC.		100%MT
CSD3-PP020-112				ACC.		100%MT
CSD3-PP020-113				ACC.		100%MT
CSD3-PP020-114				ACC.		100%MT
CSD3-PP020-115				ACC.		100%MT
CSD3-PP020-116				ACC.		100%MT
CSD3-PP020-117				ACC.		100%MT
CSD3-PP020-130				ACC.		100%MT
CSD3-PP020-131				ACC.		100%MT

EXAMINED BY 主探  <i>Xu Bing</i>	REVIEWED BY 审核  <i>Wang wei</i>
LEVEL - II SIGN 签名 / DATE日期 <i>09.01.27</i>	LEVEL-II SIGN / DATE日期 <i>09.1.27</i>
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-6966      DATE日期 2009.01.27      PAGE OF页码 3/3      Revision No: 0

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DRAWING NO. 图号: CA001(WEST) OBG PLATE PANEL SPLICE		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> , 2009
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-X, A709M-345F2-X  22/36/32/24 mm
WELDING PROCESS 焊接方法	SMAW/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			
CSD3-PP020-132				ACC.		100%MT
CSD3-PP020-133				ACC.		100%MT
CSD3-PP020-134				ACC.		100%MT
CSD3-PP020-135				ACC.		100%MT
CSD3-PP020-136				ACC.		100%MT
CSD3-PP020-137				ACC.		100%MT
CSD3-PP020-138				ACC.		100%MT
CSD3-PP020-139				ACC.		100%MT

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EXAMINED BY主探  Xubing	REVIEWED BY 审核  Wang wei
LEVEL - II SIGN 签名 / DATE日期 09.1.27	LEVEL-II SIGN / DATE日期 09.1.27
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-6955      DATE日期 2009.01.27      PAGE OF页码 1/2      Revision No: 0

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

DRAWING NO. SEG013      CALTRANS CONTRACT NO.: 04-0120F4  
 图号: OBG 3A CORNER ASSEMBLY      加州工程编号

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> , 2009
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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
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MAGNETIZING METHOD 磁化方法	Continuous magnetic yoke 磁轭式连续法	CURRENT 电流	AC
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PARTICLE TYPE 磁粉类型	Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距	70~150mm
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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-X/A709M-345T2-X 18/20/32/36 mm
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WELDING PROCESS 焊接方法	SMAW	TYPE OF JOINT 焊缝类型	T-JOINT
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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			
SSD11A-PP021-138				ACC.		100%MT
SSD11A-PP021-139				ACC.		100%MT
SSD11A-PP021-140				ACC.		100%MT
SSD11A-PP021-141				ACC.		100%MT
SSD11A-PP021-142				ACC.		100%MT
SSD11A-PP021-143				ACC.		100%MT
SSD11A-PP021-144				ACC.		100%MT
SSD11A-PP021-145				ACC.		100%MT
SSD11A-PP021-146				ACC.		100%MT
SSD11A-PP021-147				ACC.		100%MT
SSD11A-PP021-148				ACC.		100%MT
SSD11A-PP021-149				ACC.		100%MT
EP005-001-022				ACC.		100%MT
EP005-001-023				ACC.		100%MT
EP005-001-024				ACC.		100%MT

EXAMINED BY主探 <u>Cai Xinxin</u> LEVEL - II SIGN 签名 / DATE日期 09.1.27	REVIEWED BY 审核 <u>Wang wei</u> LEVEL-II SIGN / DATE日期 09.1.27
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质量经理 / QCM  签字 SIGN / 日期 DATE	用户CUSTOMER  签字 SIGN / 日期 DATE
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# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-6955      DATE日期 2009.01.27      PAGE OF页码 2/2      Revision No: 0

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

DRAWING NO.      SEG013      CALTRANS CONTRACT NO.:  
 图号:      OBG 3A CORNER ASSEMBLY      加州工程编号      04-0120F4

REFERENCING CODE      ACCEPTANCE STANDARD      PROCEDURE NO.      CALIBRATION DUE DATE  
 参考规范编码      接受标准      程序编号      仪器校正有效期  
 AWS D1.5-2002      AWS D1.5-2002      ZPQC-MT-01      Dec. 28<sup>ST</sup>, 2009

EQUIPMENT 设备      MANUFACTURER 制造商      MODEL NO. 样式编号      SERIAL NO. 连续编号  
 MT YOKE      PARKER      B310S      5395 5617 5620

MAGNETIZING METHOD      Continuous magnetic yoke      CURRENT      AC  
 磁化方法      磁轭式连续法      电流

PARTICLE TYPE      Dry magnet powder      YOKE SPACING      70~150mm  
 磁粉类型      干磁粉      磁轭间距

MATERIAL TO BE      √ WELDING 焊接件      Material & thickness      A709M-345T2-X/A709M-345T2-X  
 EXAMINED      □ CASTING 铸件      母材, 厚度      18/20/32/36 mm  
 检测材料      □ FORGING 锻造

WELDING PROCESS      SMAW      TYPE OF JOINT      T-JOINT  
 焊接方法      焊缝类型

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			
EP005-001-025				ACC.		100%MT
SP033-001-082				ACC.		100%MT
SP033-001-083				ACC.		100%MT
SP033-001-084				ACC.		100%MT
SP033-001-085				ACC.		100%MT
SP033-001-086				ACC.		100%MT
SP034-001-046				ACC.		100%MT
SP034-001-047				ACC.		100%MT
SP034-001-048				ACC.		100%MT
SP034-001-049				ACC.		100%MT
SP034-001-050				ACC.		100%MT

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EXAMINED BY主探      (ai xinxin)      REVIEWED BY 审核      Wang wei  
 LEVEL - II SIGN 签名 / DATE日期      09.01.27      LEVEL-II SIGN / DATE日期      09.1.27

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, PRC**Report No:** NCS-000259**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0203**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:** 03-Feb-2009**Description of Non-Conformance:**

ZPMC/ABF requested METS QA for final inspection on Jan. 31, 2009 for the "segment green tag" welds. During random verification Magnetic Particle Testing (MT) of corner beam assembly welds # SSD11A-PP21-142, SSD11A-PP21-143, CSD3-PP20-066, CSD3-PP20-067, CSD3-PP20-068 and CSD3-PP20-070, Caltrans Quality Assurance (QA) Inspectors discovered linear indications in each of these welds. ZPMC claimed that they have performed 100% MT testing with support recording documentation.

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

Repair area in question and submit subsequent NDT reports.

**Corrective action taken:**

Contractor submitted a CWR, performed repair, and submitted the subsequent NDT reports verifying the weld is in conformance.

**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**