

**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, P.R. China**Report No:** NCR-000235**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Mar-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0209**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> Segments 3AW/3BW
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** QA Inspector found linear indications**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector performed Magnetic Particle Testing (MT) of tack welds connecting side panels for segment 3AW to 3BW, weld joints OBW-3A-002 and OBW-3A-004. The MT result showed multiple linear indications that were found acceptable by ZPMC MT Technicians previously.

**Applicable reference:**

AWS D1.5 (2002) – Sec. 6.26.2 - "Welds that are subject to MT in addition to visual inspection shall have no cracks."

**Who discovered the problem:** Chandra Sudalaimuthu**Name of individual from Contractor notified:** Josh Ishibashi**Time and method of notification:** 03/30/2009, 0900 hours, Verbal**Name of Caltrans Engineer notified:** Stanley Ku**Time and method of notification:** 03/29/2009, 1300 hours, Verbal**QC Inspector's Name:** Wang Zhu

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**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 Eric Tsang, +(86) 1500.042.2372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Tsang, Eric	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:** 06-Apr-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:** 05.03.06-000203

**Subject:** NCR No. ZPMC-0209

**Reference Description:** QA Inspector found linear indications

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:

Caltrans Quality Assurance (QA) Inspector performed Magnetic Particle Testing (MT) of tack welds connecting side panels for segment 3AW to 3BW, weld joints OBW-3A-002 and OBW-3A-004. The MT result showed multiple linear indications that were found acceptable by ZPMC MT Technicians previously.

### Action Required and/or Action Taken:

A response for the resolution of this issue is expected within 14 days.

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

**Attachments:** ZPMC-0209

**cc:** Rick Morrow, Gary Pursell, Brian Boal, Jason Tom, 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:** 05.03.06-000203

**Subject:** NCR No. ZPMC-0209

**Dated:** 20-May-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000214 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC has performed documented training to prevent this non-conformance from recurring. Also ZPMC has increased the inspection frequency to further evaluate the welds requiring a percentage of NDT.

ZPMC has performed documented training to prevent this non-conformance from recurring. Also ZPMC has increased the inspection frequency to further evaluate the welds requiring a percentage of NDT. ZPMC requests closure of this NCR.

### Submitted by:

**Attachment(s):** ABF-NPR-000214R00

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### Caltrans' comments:

**Status:** AAP

**Date:** 03-Jun-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-0209 at that time.

**Submitted by:** Wright, Doug

**Date:** 03-Jun-2009

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000203

**Subject:** NCR No. ZPMC-0209

**Dated:** 08-Jun-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000214 Rev: 01

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**Contractor's Proposed Resolution:**

**Reference Resolution:** Attached is documentation of work performed regarding this NCR. ZPMC requests this NCR be closed.  
Attached is documentation of work performed regarding this NCR. ZPMC requests this NCR be closed.

**Submitted by:**

**Attachment(s):** ABF-NPR-000214R01;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 24-Jun-2009

The proposed resolution is acceptable. The welds in question have been accepted by VT, MT, and UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0209 is closed.

**Submitted by:** Wright, Doug

**Date:** 24-Jun-2009

**Attachment(s):**



B-VI 23119

周数  
日期

77  
2009.04.25

**Visual Weld Inspection Report**  
**焊缝目视检查报告**

Girder/ 梁: OBG Plate Panel Splice  
Tower/ 塔:

Caltrans Contract No.  
加州合同编号: 04-0120F4

Quality Control Representative:  
质检代表: *[Signature]*

Project No.: San Francisco Oakland Bay Bridge 美  
项目名称: 国海湾大桥

CWI:  
检验员: Wu Zhicheng  
08021751

Project No.: ZP06-787  
项目编号:

Quality Assurance Manager - Approval  
质量控制经理: *[Signature]*

Weld No. 焊缝编号	Welder I.D.# 焊工识别号	Location 位置	Welding consumables 焊接材料	Undercut 咬边	Porosity 气孔	Over lap 焊瘤	Crater 弧坑	Arc strike 电弧擦伤	Spatters 飞溅	Crack 裂纹	Accept or Reject 接受或拒收	Repair 返修	Accept or Reject after repair 返修后接受或拒收
OBW3A-001	220068	2G	71H(φ1.4)	√	√	√	√	√	√	√	ACC	NA	NA
OBW3A-002	220068	2G	71H(φ1.4)	√	√	√	√	√	√	√	ACC	NA	NA
OBW3A-003	220068	2G	71H(φ1.4)	√	√	√	√	√	√	√	ACC	NA	NA
OBW3A-004	220068	2G	71H(φ1.4)	√	√	√	√	√	√	√	ACC	NA	NA
OBW3A-005	220068	3G	71H(φ1.4)	√	√	√	√	√	√	√	ACC	NA	NA
<p>ZPMC - W9</p> <p>final VT/UT/MT</p> <p>MT reports</p> <p>(no requirement for tack weld)</p>													

After root weld       After cover pass  
 After CWR or WRR No. : B-WK 3910, 3911, 3912, 3913, 3914       After HSR No. :       Others

" / " is no defects " X " is defects. "NA" is not applicable.

B-VI 23779







# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-10172      DATE日期 2009.05.01      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: OBW3 3AW+3BW		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-345  18/22/20/16 mm
WELDING PROCESS 焊接方法	FCAW+SMAW	TYPE OF JOINT 焊缝类型	BUTT

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			
OBW3A-001				ACC.		100%MT
OBW3A-002				ACC.		100%MT
OBW3A-003				ACC.		100%MT
OBW3A-004				ACC.		100%MT
OBW3A-005				ACC.		100%MT

**BLANK**


EXAMINED BY主探  LEVEL - II SIGN 签名 / DATE日期	REVIEWED BY 审核  LEVEL-II SIGN / DATE日期
质量经理 / QCM  签字 SIGN / 日期 DATE	用户CUSTOMER  签字 SIGN / 日期 DATE

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000234**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0209**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:** 28-Mar-2009**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector performed Magnetic Particle Testing (MT) of tack welds connecting side panels for segment 3AW to 3BW, weld joints OBW-3A-002 and OBW-3A-004. The MT result showed multiple linear indications that were found acceptable by ZPMC MT Technicians previously.

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

ZPMC QC inspectors to receive training training in regards to performing MT inspections in conformance with Section 6.26.2 of AWS D1.5. Frequency of MT inspections to be increased.

**Corrective action taken:**

ZPMC QC inspectors to received training training in regards to performing MT inspections in conformance with Section 6.26.2 of AWS D1.5. Frequency of MT inspections was increased. The welds in question were repaired and accepted.

**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

**Inspected By:** Lowry,Patrick

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer