

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

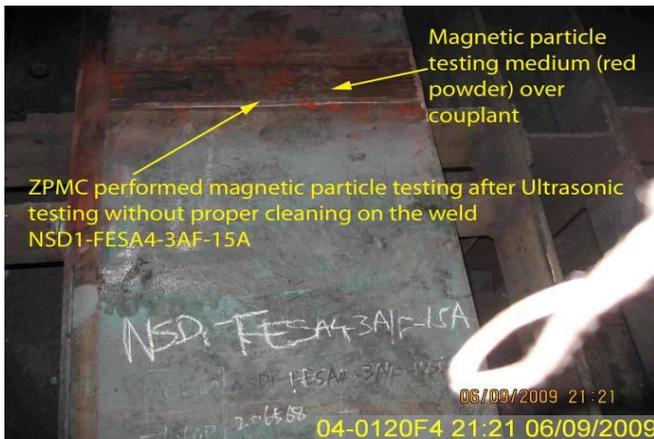
Quality Assurance and Source Inspection



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-000300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 09-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0274**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** North Tower, Lift 4, Skin D**Procedural****Procedural****Description:** Longitudinal Stiffener MT over couplant**Reference Description:** Longitudinal Stiffener MT over couplant**Description of Non-Conformance:**

QA observed that ZPMC personnel had performed Magnetic Particle Testing (MT) over a film of residual couplant from prior Ultrasonic Testing (UT) on longitudinal stiffener butt welds SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A and NSD1-FDSA4-3A/C-11A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.

**Applicable reference:**

AWS D1.5-2002, Section 6.7.6.3: "Prior to MT, the surface shall be examined, and any adjacent area within at least 25 mm [1 in.] of the surface to be tested, shall be dry and free of contaminants such as oil, grease, loose rust, loose sand, loose scale, lint, thick paint, welding flux, and weld spatter."

ASTM E709 Section: "Dry particles must not be applied to a damp surface; they will have limited mobility."

Who discovered the problem: Shrikant Utekar**Name of individual from Contractor notified:** Zhang Jiad

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 6-9-2009, 22:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 6-10-2009, 13:00; Verbal

QC Inspector's Name:

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 Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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:	10-Jun-2009
Dear:	Mr. Charles Kanapicki	Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Job Name:	SAS Superstructure
Subject:	NCR No. ZPMC-0274	Document No:	05.03.06-000264

Reference Description: MT Procedure Deficiencies / North Shaft Lift 4 Skin D

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: Tower **Lift:** 04

Remarks:

QA observed that ZPMC personnel had performed Magnetic Particle Testing (MT) over a film of residual couplant from prior Ultrasonic Testing (UT) on longitudinal stiffener butt welds SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A and NSD1-FDSA4-3A/C-11A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.

AWS D1.5-2002, Section 6.7.6.3: "Prior to MT, the surface shall be examined, and any adjacent area within at least 25 mm [1 in.] of the surface to be tested, shall be dry and free of contaminants such as oil, grease, loose rust, loose sand, loose scale, lint, thick paint, welding flux, and weld spatter." ASTM E709 Section: "Dry particles must not be applied to a damp surface; they will have limited mobility."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance that addresses the failure of Quality Control to perform the magnetic particle examination (MT) in accordance with the contract requirements. Include with the resolution the NDT (MT) results for the subsequent test / retest of the above referenced welds. Provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0274

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe, 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: 05.03.06-000264

Subject: NCR No. ZPMC-0274

Dated: 24-Aug-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000307 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ABF QCM has had several discussions with ZPMC MT technicians regarding MT over coatings and MT over contaminants. ABF has instructed ZPMC to clean the weld as required and re-MT.

ABF QCM has had several discussions with ZPMC MT technicians regarding MT over coatings and MT over contaminants. ABF has instructed ZPMC to clean the weld as required and re-MT. ZPMC will submit MT reports at a later date to close this NCR.

Submitted by:

Attachment(s): ABF-NPR-000307R00

Caltrans' comments:

Status: AAP

Date: 31-Aug-2009

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

Please provide documentation of the weld in question is acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0274 at that time.

Submitted by: Wright, Doug

Date: 31-Aug-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000264

Subject: NCR No. ZPMC-0274

Dated: 14-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000307 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has retested the welds when they were free of any residue and is providing the NDT documentation to show the welds are acceptable. Based on this ZPMC is requesting closure of the NCR.

Per Caltrans' comments ZPMC has retested the welds when they were free of any residue and is providing the NDT documentation to show the welds are acceptable. Based on this ZPMC is requesting closure of the NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000307R01;

Caltrans' comments:

Status: CLO

Date: 16-Dec-2009

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0274 is closed.

Submitted by: Lee, Ken

Date: 16-Dec-2009

Attachment(s):



No. T-054

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-9-11

REGARDING: NCR-000300 (ZPMC-0274)

ZPMC received NCR-000300 (ZPMC-0274), it mentioned that ZPMC personnel had MT over a film over a film of residual couplant from prior UT on longitudinal stiffeners butt welds. The layer of couplant prevents magnetic particles from moving freely on the surfaces of welds. The related welds no. is: NSD1-FDSA4-3A/C-11A, SSD1-FCSA4-1A/C-66A and NSD1-FESA4-3A/F-15A.

ZPMC did investigation when received this NCR, and had put forward ZPMC's NCR-T-047. To the related welds no. SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A, ZPMC had acknowledge the problem and removed the contamination couplant and performed re-inspection. To the weld no. NSD1-FDSA4-3A/C-11A, the required MT percentage is 25%, and ZPMC had reached this requirement by did MT on weld NSD1-FDSA4-3A/C-9A. As you can see in the picture of your NCR, ZPMC did remove the couplant on the run-on-off tab and MT on the end of the weld NSD1-FDSA4-3A/C-11A.

ZPMC had inculcated NDT inspector and will enhance them be more responsible and careful in order to avoid such situation happened again in the future.

Here attached the related VT and NDT reports, the result shows the issue didn't influence the weld quality. So ZPMC hope CT could take a review and close this NCR.

ATTACHMENT:

NCR-000300 (ZPMC-0274)

T787-UT-1848

T787-MT-4441

T787-UT-1847

T787-MT-4485

T787-UT-1849

T787-MT-4440

陆建华 9/11/09



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B

项目名称: 美国加州海湾大桥

NCR Number:

NCR 编号: NCR-T-047(ZPMC-0274)

Item: MT Procedure Deficiencies

名称描述: MT 工艺不符合标注

Item Number:

件号:

North and South
Tower Lift 4,
longitudinal
stiffeners

Drawing: 图号:

NSD1-FDSA4-3A/C-11A

SSD1-FCSA4-1A/C-66A

NSD1-FESA4-3A/F-15A

Location: bay 10

位置: 10#车间

Date:

日期: 2009-06-15

Description of Nonconformance: 不符合项状态描述:

CT inspector observed ZPMC personnel had MT over a film of residual couplant from prior UT on longitudinal stiffeners butt welds NSD1-FDSA4-3A/C-11A, SSD1-FCSA4-1A/C-66A and NSD1-FESA4-3A/F-15A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.

AWS D1.5-2002, Section 6.7.6.3: Prior to MT, the surface shall be examined, and any adjacent area within at least 25mm of the surface to be tested, shall be dry and free of contaminants such as oil, grease, loose rust, loose sand, loose scale, lint, thick paint, welding flux, and weld spatter. ASTM A709 Section: Dry particles must not be applied to a damp surface; they will have limited mobility.

加州检验员发现 ZPMC 在对如下焊缝: NSD1-FDSA4-3A/C-11A, SSD1-FCSA4-1A/C-66A and NSD1-FESA4-3A/F-15A 进行 MT 复探时, 没有清除之前 UT 的耦合剂。这层耦合剂妨碍了磁粉在焊缝表面的自由流动性。

根据 AWS 的相关规定: MT 之前, 必须检查表面, 至少在被检查表面邻近 25mm 区域内保持干燥, 并且无油脂, 润滑剂, 沙砾, 铁锈等妨碍磁粉走向的污染物存在。另外, 根据 ASTM 规定: 干的磁粉微粒不允许施加在潮湿的表面, 这会影响其自然流动性。

Work By: *Li Lin*

施工方:

2009.06.15

Prepared by: *Zhang Jintao*

准备:

2009.6.15

Reviewed by QCE: *Liu Yanping*

质量工程师批准:

6/15/09

Drawing Error

图纸错误

Material Defect

材料缺陷

Fabrication Error

制作错误

Other

其他原因

Disposition:

Use as is

处理措施:

回用

Repair

返修

Reject

拒收

Recommendation:

建议:

去除污染物重新检测.

Remove dirty and re-inspection.

Prepared by: Li Liming
准备 2009.06.20

Approved by QCA: _____
质量经理批准

Reason for Nonconformance:

不符合原因:

漆料没有去除干净.

Didn't remove capant completely.

Prevention of Re-occurrence:

预防措施:

加强教育, 加强培训.

Train and educate MT inspector.

Approved by/批准: Li Liming 2009.06.20

Technical Justification for Use-As-Is/Repair:

Attachment

Non-attachment

回用或返修的技术依据:

附件

无附件

Reviewed /批准: _____

Verification:

Acceptable

Unacceptable

确认:

可接受

不可接受

Verified by QCI/质检确认: _____

Reviewed by QCA/质检主任审核: _____



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: 10-Jun-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: 05.03.06-000264

Subject: NCR No. ZPMC-0274

Reference Description: MT Procedure Deficiencies / North Shaft Lift 4 Skin D

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: Tower

Lift: 04

Remarks:

QA observed that ZPMC personnel had performed Magnetic Particle Testing (MT) over a film of residual couplant from prior Ultrasonic Testing (UT) on longitudinal stiffener butt welds SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A and NSD1-FDSA4-3A/C-11A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.

AWS D1.5-2002, Section 6.7.6.3: "Prior to MT, the surface shall be examined, and any adjacent area within at least 25 mm [1 in.] of the surface to be tested, shall be dry and free of contaminants such as oil, grease, loose rust, loose sand, loose scale, lint, thick paint, welding flux, and weld spatter." ASTM E709 Section: "Dry particles must not be applied to a damp surface; they will have limited mobility."

Action Required and/or Action Taken:

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Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0274

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe, Jason Tom

File: 05.03.06

02 02 15 04
05.03.06-000264.NCT

Received
NCT-000264 11 Jun 09 Page 1 of 1

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-000300

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 09-Jun-2009

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

NCR #: ZPMC-0274

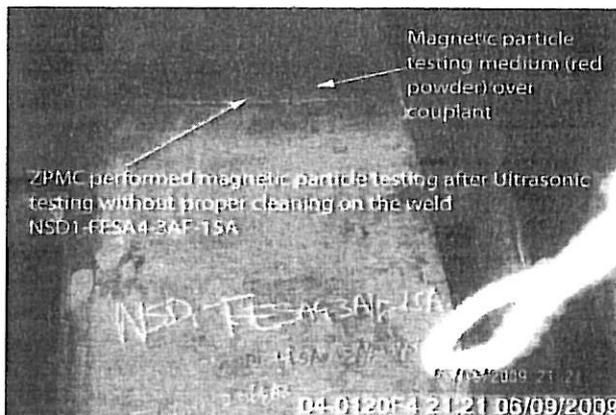
Type of problem:

Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** North Tower, Lift 4, Skin D
 Procedural **Description:** Longitudinal Stiffener MT over couplant

Reference Description: Longitudinal Stiffener MT over couplant

Description of Non-Conformance:

QA observed that ZPMC personnel had performed Magnetic Particle Testing (MT) over a film of residual couplant from prior Ultrasonic Testing (UT) on longitudinal stiffener butt welds SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A and NSD1-FDSA4-3A/C-11A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.



Applicable reference:

AWS D1.5-2002, Section 6.7.6.3: "Prior to MT, the surface shall be examined, and any adjacent area within at least 25 mm [1 in.] of the surface to be tested, shall be dry and free of contaminants such as oil, grease, loose rust, loose sand, loose scale, lint, thick paint, welding flux, and weld spatter."

ASTM E709 Section: "Dry particles must not be applied to a damp surface; they will have limited mobility."

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Zhang Jiad

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 6-9-2009, 22:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 6-10-2009, 13:00; Verbal

QC Inspector's Name:

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 Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-1848 DATE 2009.06.10 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: FOURTH LIFTING TOWER(N) SKIN E DRAWING NO.: NSD1-FESA4-3A/F CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-345T2-Z 100mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm	Changchao	45°	2.5MHz	18×18mm
Changchao	0°	2.5MHz	20mm				

Reference Level 参考灵敏度

20dB

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)						
					a	b	c	d	Length 长度	Sound Path 声程	Depth from Surface 距表面深度	From X 距X	From Y 距Y		
NSD1-FESA4-3A/F-15A/B		70				34								ACC.	100%
		45				34								ACC.	100%

AFTER HSR1(T)-9284

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EXAMINED BY 主探: Xu Ronggang DATE: 06.10
 LEVEL - II SIGN / DATE REVIEWED BY 审核: Tang Xing DATE: 06.10
 LEVEL - II SIGN / DATE

质量经理 / QCM: Lu Jinhua 用户 CUSTOMER: _____
 签字 SIGN / 日期 DATE: 06.10 签字 SIGN / 日期 DATE: _____



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-4441		DATE日期 2009.06.09		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: NSD1-FESA4-3A/F THE 4 TH LIFTING TOWER(N) SKIN E			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 ST , 2009	
EQUIPMENT 设备 MT YOKE		MANUFACTURER 制造商 PARKER		MODEL NO. 样式编号 B310S		SERIAL NO. 连续编号 5620 5395 5617	
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-Z 100mm	
WELDING PROCESS 焊接方法		SAW		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				
NSD1-FESA4-3A/F-15A				ACC.		100%MT	
NSD1-FESA4-3A/F-15 B						*	
* NSD1-FESA4-3A/F-15A was MT inspection and ACC, which is the result of required 25% MT.							
* NSD1-FESA4-3A/F-15A 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。							
AFTER HSR1(T)-9284							
BLANK							
EXAMINED BY 主探 Xu hai Xu Hai				REVIEWED BY 审核 BUTIN NI			
LEVEL - II SIGN 签名 / DATE 日期 .09.06.09				LEVEL-II SIGN / DATE 日期 2009.6.9			
质量经理 / QCM Lijianghua 2009.06.16				用户 CUSTOMER			
签字 SIGN / 日期 DATE				签字 SIGN / 日期 DATE			



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 T787-UT-1849 DATE 2009.06.10 PAGE 1 OF 1 Revision No: 0

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

ITEMS NAME: FOURTH LIFTING TOWER(N) SKIN D DRAWING NO.: NSD1-FDSA4-3A/C CALTRANS CONTRACT NO.: 04-0120F4
 部件名称 图号 加州工程编号

REFERENCING CODE 参考规范 ACCEPTANCE STANDARD 接受标准 PROCEDURE NO. 程序编号
 AWS D1.5-2002 AWS D1.5-2002(Table 6.3) ZPQC-UT-01

WELDING PROCESS 焊接方法 JOINT TYPE 焊缝类型 CALIBRATION DUE DATE 仪器校正有效期
 SAW BUTT Dec. 28ST, 2009

EQUIPMENT 设备 MANUFACTURER 制造商 MODEL NO. 样式编号 SERIAL NO. 序列编号
 UT SCOPE PANAMETRICS EPOCH-4B 071565311, 061488510, 061495811, 070152011,

CALIBRATION BLOCK 试块 COUPLANT 耦合剂 MATERIAL/THICKNESS 材料厚度
 AWS IIV BLOCK TYPE II C.M.C A709M-345T2-Z 90mm

TRANSDUCER 探头

MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸	MANUFACTURER 制造商	ANGLE 角度	FREQUENCY 频率	SIZE 尺寸
Changchao	70°	2.5MHz	18×18mm	Changchao	45°	2.5MHz	18×18mm
Changchao	0°	2.5MHz	20mm				

Reference Level 参考灵敏度

20dB

Base metal inspected per AWS D1.5-2002 Section 6.19.5 0° UT OK.

WELD IDENTIFICATION 焊缝部件编号	INDICATION NO. 指示号	PROBE ANGLE 探测角度	FROM FACE 检测面	LEG (次数)	DECIBELS 分贝				DISCONTINUITY 不连续性					Discontinuity Evaluation 缺陷估计	Remark 备注	
					Indication Level	Reference Level	Attenuation Factor	Indication Rating	LOCATION OF DISCONTINUITY 不连续位置(mm)							
									a	b	c	d	Length 长度			Sound Path 声程
NSD1-FDSA4-3A/C-9A/B		70				34									ACC.	100%
		45				34									ACC.	100%
NSD1-FDSA4-3A/C-11A/B		70				34									ACC.	100%
		45				34									ACC.	100%

AFTER HSR1(T)-9292

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EXAMINED BY 主探 <i>Xu Ronggang</i> 07.06.10 LEVEL - II SIGN / DATE	REVIEWED BY 审核 <i>Tony King</i> 06.10.09 LEVEL - II SIGN / DATE
质量经理 / QCM <i>Lu Jianhui</i> 2009.06.17 签字 SIGN / 日期 DATE	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-4440		DATE 日期 2009.06.09		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: NSD1-FDSA4-3A/C THE 4 TH LIFTING TOWER(N) SKIN D				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 ST , 2009																																									
EQUIPMENT 设备 MT YOKE		MANUFACTURER 制造商 PARKER		MODEL NO. 样式编号 B310S		SERIAL NO. 连续编号 5620 5395 5617																																									
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-Z 90mm																																									
WELDING PROCESS 焊接方法		SAW		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																																												
NSD1-FDSA4-3A/C-9A				ACC.		100%MT																																									
NSD1-FDSA4-3A/C-9B						*																																									
NSD1-FDSA4-3A/C-11A/B						*																																									
* NSD1-FDSA4-3A/C-9A was MT inspection and ACC, which is the result of required 25% MT. * NSD1-FDSA4-3A/C-9A 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。																																															
AFTER HSR1(T)-9292																																															
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<table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																															
EXAMINED BY 主探 Xu hai Xu Hai LEVEL - II SIGN 签名 / DATE 日期 09.06.09 质量经理 / QCM Lu Jianhua Lu Jianhua 2009.06.09 签字 SIGN / 日期 DATE				REVIEWED BY 审核 Bojijinj LEVEL-II SIGN / DATE 日期 2009.6.9 用户 CUSTOMER 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-000379**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 16-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0274**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Descriptor:	

Date the Non-Conformance Report was written: 09-Jun-2009**Description of Non-Conformance:**

QA observed that ZPMC personnel had performed Magnetic Particle Testing (MT) over a film of residual couplant from prior Ultrasonic Testing (UT) on longitudinal stiffener butt welds SSD1-FCSA4-1A/C-66A, NSD1-FESA4-3A/F-15A and NSD1-FDSA4-3A/C-11A. This layer of couplant prevents magnetic particles from moving freely on the surfaces of the welds.

Contractor's proposal to correct the problem:

Contractor to inform ZPMC that all residual couplant must be cleaner prior to performing MT.

Corrective action taken:

ZPMC has instructed NDT technicians to ensure that all residual couplant and other contaminants be removed prior to MT. Furthermore, the affected welds were cleaned, reinspected, and NDT documentation indicating sound welds has been submitted.

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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod, Serge

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer