

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-000288

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 03-Jun-2009

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

NCR #: ZPMC-0262

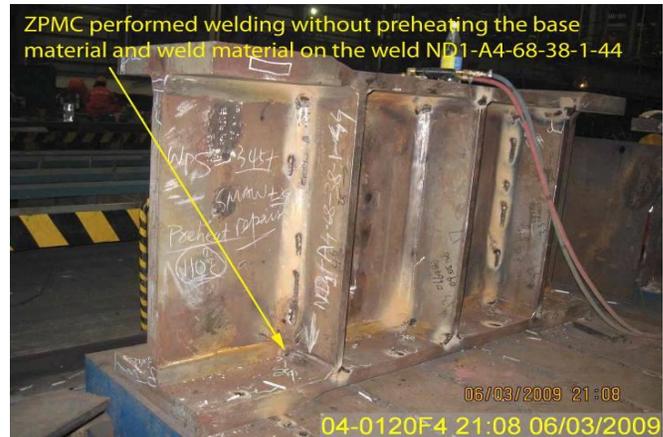
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Type 3 Strut
Procedural	Procedural	Description: Lack of preheat on Type 3 Strut	

Reference Description: Lack of preheat on Type 3 Strut

Description of Non-Conformance:

QA observed ZPMC personnel welding Type 3 Strut weld ND1-A468-38-1-44 without preheating the weld and adjacent base material.



Applicable reference:

Welding procedure WPS-345-SMAW-2G (2F)-Repair requires the base material and weld material to be preheated to a minimum of 120 degrees Celsius.

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Xie Yan

Time and method of notification: 06/03/2009; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 06/04/2009; Verbal

QC Inspector's Name: Yu Pong Ping

Was QC Inspector aware of the problem:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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
Reviewed By:	Wahbeh,Mazen	SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000255

Subject: NCR No. ZPMC-0262

Dated: 13-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000256 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ABF has instructed ZPMC to perform 100% MT a minimum of 48 hours after welding. The records of MT inspection will be provided at a later date.

ABF has notified ZPMC of this Non-Conformance. ZPMC has instructed ABF that the portion of the weld not pre-heated was welding performed to bring the Cope hole area into visual inspection compliance and not the entire welding of the Strut, but will monitor pre-heating more closely. ABF has instructed ZPMC to perform 100% MT a minimum of 48 hours after welding. The records of MT inspection will be provided at a later date.

Submitted by:

Attachment(s): ABF-NPR-000256R00

Caltrans' comments:

Status: AAP

Date: 05-Aug-2009

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

Please provide the inspection documentation for the weld in question a minimum of 48 hours after welding. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0262 at that time.

Submitted by: Wright, Doug

Date: 05-Aug-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000255

Subject: NCR No. ZPMC-0262

Dated: 25-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000256 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: The actual WPS for the material being welded is WPS-SL345-SMAW-2G-Repair, which requires a preheat of 80 degrees Celsius. The non conformance is not valid and ZPMC requests closure of this NCR.

This non conformance was written based on the inspector's observation that the WPS (WPS -345-SMAW-2G(2F)-Repair) that he thought was being used required a preheat of a minimum of 120 degrees Celsius. The actual WPS for the material being welded is WPS-SL345-SMAW-2G-Repair, which requires a preheat of 80 degrees Celsius. The 110 degree temperature indicating crayon used by the inspector would not have melted when applied to the base metal because the shear link was preheated to 80 degrees Celsius per the correct WPS. Attached are the both WPS. Based on this the non conformance observed is not valid and ZPMC requests closure of the NCR.

Submitted by:

Attachment(s): ABF-NPR-000256R01;

Caltrans' comments:

Status: REJ

Date: 10-Dec-2009

The Department recognizes that there might have been an error identifying the correct WPS. However, it should be noted that this NCR was written because there was no preheat, not inadequate preheat.

In the original NPR (ABF-NPR-000256R0) submitted on 7/13/2009, ZPMC admitted that a certain section of this member was not preheated. ABF JV stated at that time that it had instructed ZPMC to perform 100% MT a minimum of 48 hours after welding and the records of MT inspection would be provided. However, more than 4 months later, ABF JV/ ZPMC's subsequent response to this non-conformance is "the shear link was preheated to 80 degrees Celsius per the correct WPS" and therefore "non-conformance observed is not valid." This response is inconsistent and once again reveals the internal communication gap between ZPMC's Production and QC as the writer of this response was not familiar with the actual non-conformance as it happened.

In addition, ZPMC stated in the response, "CT was not only unfamiliar with the site WPS used, but also insisted on his mistake." The Department always provides ZPMC opportunities to elevate their protests through a proper channel so that there would be a common understanding of issues at hand as well as proper directions for the successful completion of this project. In the future, the Department recommends that such issues are brought up to the appropriate task leaders so that "unfair NCR's" can be avoided.

This NCR remains in effect with the new WPS, WPS-SL345-SMAW-2G-Repair. Please address all issues identified in the Department's transmittal letter and submit the associated WRR (Welding Repair Report) so that this NCR can be closed in a timely manner.

Submitted by: Lee, Ken

Date: 10-Dec-2009

Attachment(s):



No. T-088

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-11-24

REGARDING: NCR-000288(ZPMC-0262)

ZPMC received NCR-000288(ZPMC-0262), it mentioned that QA observed ZPMC personnel welding Type 3 strut weld ND1-A468-38-44 without enough preheat temperature in compliance with WPS-345-SMAW-2G (2F)-Repair.

As a responsible attitude, ZPMC investigated the truth at the first time. The fact situation was according to the WPS-SL345-SMAW-2G-Repair, the minimum required preheating temperature was 80 degrees Celsius, but not as the NCR mentioned 120 degrees Celsius based on WPS-345-SMAW-2G (2F). As an inspector, this CT inspector was not only unfamiliar with the site WPS used, but also insisted on his mistake, even when ZPMC and AB/F people explained it to him. What was unreasonable and incomprehensible, this so-called NCR still be issued out. As such events like CT people ignored fact, neglected AB/F and ZPMC's explanation and gave ZPMC unfair NCR had been occurred for several times, here ZPMC had to announced, as a responsible work attitude, before action some CT inspectors need think more but not assume something as a matter of course

So ZPMC hope Caltrans could take a review and withdraw this NCR.

ATTACHMENT:

WPS-SL345-SMAW-2G-Repair

WPS-345-SMAW-2G (2F)-Repair

Zhang Isadi
2009.11.24



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: 05-Jun-2009

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0262

Document No: 05.03.06-000255

Reference Description: Preheat / Tower Lift 1 / Type 3 Strut

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: 01

Remarks:

QA observed ZPMC personnel welding Type 3 Strut weld ND1-A468-38-1-44 without preheating the weld and adjacent base material.

Welding procedure WPS-345-SMAW-2G (2F)-Repair requires the base material and weld material to be preheated to a minimum of 120 degrees Celsius.

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance including documentation that the welds placed are in compliance with the contract requirements. In addition to Production's failure to perform the required preheat of the material, address the failure of Quality Control to identify the lack of preheat. Provide documentation of the steps/actions taken by Production and Quality Control to prevent future occurrences. In addition, detail what steps/actions are being taken by ABFJV to control the actions and address the quality control failures of ABFJV's fabricator/ZPMC.

Recent failures by Quality Control to identify and Production to perform the required preheating of the material have resulted in the issuance of NCR ZPMC-0202, ZPMC-0233, ZPMC-0249, ZPMC-0259 and an additional Incident Report concerning lack of preheating on 03/28/09 (Tower).

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0262

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

File: 05.03.06

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

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(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-000288**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Jun-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0262**Type of problem:**

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: Type 3 Strut
 Procedural Procedural Description: Lack of preheat on Type 3 Strut

Reference Description: Lack of preheat on Type 3 Strut**Description of Non-Conformance:**

QA observed ZPMC personnel welding Type 3 Strut weld ND1-A468-38-1-44 without preheating the weld and adjacent base material.

**Applicable reference:**

Welding procedure WPS-345-SMAW-2G (2F)-Repair requires the base material and weld material to be preheated to a minimum of 120 degrees Celsius.

Who discovered the problem: Shrikant Utekar**Name of individual from Contractor notified:** Xie Yan**Time and method of notification:** 06/03/2009; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 06/04/2009; Verbal**QC Inspector's Name:** Yu Pong Ping**Was QC Inspector aware of the problem:**

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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
Reviewed By:	Wahbeh,Mazen	SMR



焊接工艺规程 B*

WPS-SL345-SMAW-2G-Repair

WELDING PROCEDURE SPECIFICATION

有效期 Period of validity

FCM: 2007.5~2010.5

NON-FCM: 2007.5~2012.5

母材技术条件 (Material specification) SHEAR LINK GRADE 345

焊接方法 (Welding process) 药皮焊条手工电弧焊(SMAW)

手工或机械 (Manual or machine or semi-auto) 手工(Manual)

焊接位置 (Position of welding) 横焊(2G)

填充金属技术条件 (Filler metal specification) AWS A5.1

填充金属级别 (Filler metal classification) E7018-1

填充金属牌号 (Filler metal brand) THJ506Fe-1 (Φ4.0、Φ5.0)

焊剂 (Flux) N/A

保护气体 (Shielding gas) N/A

流率 (Flow rate) N/A

单焊道或多焊道 (Single or multiple pass) 多道(Multiple Pass)

单弧或多弧 (Single or multiple arc) 单弧(Single arc)

焊接电流 (Welding current) 直流(DC)

极性 (Polarity) 反接(EP)

焊丝伸出长度 (Electrode extension) N/A

焊接方向 (Welding progression) N/A

根部处理 (Root treatment) N/A

碳刨前预热温度 (Preheat temperature before gouging)

非关键性返修 (Noncritical repair) N/A

关键性返修 (Critical repair) $\geq 65^{\circ}\text{C}$

焊前最低预热温度和道间温度 (Minimum preheat and interpass temperature before welding)

非关键性返修 (Noncritical repair) 40°C [$T \leq 20\text{mm}$] 60°C [$20\text{mm} < T \leq 40\text{mm}$] 80°C [$40\text{mm} < T \leq 60\text{mm}$] 140°C [$60\text{mm} < T$]

关键性返修 (Critical repair) 160°C [$T \leq 40\text{mm}$] 200°C [$40\text{mm} < T$]

最高预热和道间温度 (Preheat and interpass temperature Max) 230°C

后热温度 (Postheat temperature)

非关键性返修 (Noncritical repair) N/A

关键性返修 (Critical repair) $230^{\circ}\text{C} \sim 315^{\circ}\text{C}$

保温时间 (Keep temperature time) $1\text{h}/25\text{mm}$ [$1\text{h}, T < 25\text{mm}$]

热输入 (线能量) (Heat input) 最小 (Min) 2.1KJ/mm

最大 (Max) 3.3KJ/mm

焊接工艺

(Welding procedure)

焊道序号 Pass No.	焊条(丝)规格 Electrode Size (mm)	焊接电流 Welding Current		焊接速度 Travel Speed (mm/min)	接头详图 Joint Detail
		安培 Amp(s)	伏特 Volts		
1~n 或 1~n	4.0 5.0	160~210 180~240	19~27 20~28	55.3~162 65.5~192	见附页(see attached) This document is: APPROVED State of California DEPARTMENT OF TRANSPORTATION Pursuant Section 5-1.02 of the Standard Specifications Initial <u>SVE</u> Date: <u>3/12/08</u>
选定适用的电流、电压后在 WPS 焊接参数选用表中查到焊接速度范围。 Refer to WPS parameters table to determine operating parameter to stay within the heat input limit.					

该工艺可以因制造工序、装配、焊道尺寸等而变化,但应在 AASHTO/AWS D1.5 第 5 章给出的变量限值之内。

(This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variable given in Section 5.)

修订号 (Revision No.) 0

批准 (Authorized by) [Signature]

工艺评定记录编号 (PQR No.) HP2007518

日期 (Date) 2008.2.19

* 本 WPS 符合 AASHTO/AWS D1.5 2002, 用于桥梁结构。

(This WPS is conformable with the current edition of AASHTO/AWS D1.5 2002, used for BRIDGE structure.)



焊接工艺规程 B*

WELDING PROCEDURE SPECIFICATION

编号 No.
WPS-345-SMAW-2G(2F)-Repair
(返修焊接工艺)

有效期 Period of validity
无期限 No Requirement

母材技术条件 (Material specification) ASTMA.709M Gr.345F2
 焊接方法 (Welding process) 药皮焊条手工电弧焊(SMAW)
 手工或机械 (Manual or machine or semi-auto) 手工(Manual)
 焊接位置 (Position of welding) 横焊(2G、2F)
 填充金属技术条件 (Filler metal specification) AWSA5.1 填充金属级别 (Filler metal classification) E7018
 填充金属牌号 (Filler metal brand) TL-508 (Φ3.2、Φ4.0、Φ5.0)
 焊剂 (Flux) N/A
 保护气体 (Shielding gas) N/A 流率 (Flow rate) N/A
 单焊道或多焊道 (Single or multiple pass) 多道(Multiple Pass)
 单弧或多弧 (Single or multiple arc) 单弧(Single arc)
 焊接电流 (Welding current) 直流(DC) 极性 (Polarity) 反接(EP)
 焊丝伸出长度 (Electrode extension) N/A
 焊接方向 (Welding progression) N/A
 根部处理 (Root treatment) N/A
 碳刨前预热温度(Preheat temperature before gouging)
 非关键性返修 (Noncritical repair) N/A 关键性返修 (Critical repair) ≥65℃
 焊前最低预热温度和道间温度 (Minimum preheat and interpass temperature before welding)
 非关键性返修 (Noncritical repair) 60℃ [T≤20mm] 100℃ [20mm<T≤40mm] 120℃ [40mm<T≤60mm] 160℃ [60mm<T]
 关键性返修 (Critical repair) 160℃ [T≤40mm] 200℃ [40mm<T]
 最高预热和道间温度 (Preheat and interpass temperature Max) 230℃
 后热温度(Postheat temperature)
 非关键性返修 (Noncritical repair) N/A
 关键性返修 (Critical repair) 230℃~315℃ 保温时间(Keep temperature time) 1h/25mm [1h, T<25mm]
 热输入 (线能量) (Heat input) 最小(Min) 1.50KJ/mm 最大(Max) 3.50KJ/mm
 焊接工艺
(Welding procedure)

焊道序号 Pass No.	焊条(丝)规格 Electrode Size (mm)	焊接电流 Welding Current		焊接速度 Travel Speed (mm/min)	<input type="checkbox"/> APPROVED <input checked="" type="checkbox"/> 接头详图 APPROVED AS NOTED Joint Detail <input type="checkbox"/> NOT APPROVED
		安培 Amp(s)	伏特 Volts		
1~n 或	3.2	90~130	18~24	28~124	见附页(see attached) pursuant to Section 5-1.02 of the Standard Specifications State of California DEPARTMENT OF TRANSPORTATION Signed <i>[Signature]</i> Sr. RTM Structure Representative 7-30-07
1~n 或	4.0	140~180	20~27	48~194	
1~n	5.0	180~240	24~32	75~307	

选定适用的电流、电压后在 WPS 焊接参数选用表中看到焊接速度范围。
 Refer to WPS parameters table to determine operating parameter to stay within the heat input limit.

该工艺可以因制造工序、装配、焊道尺寸等而变化,但应在 AASHTO/AWS D1.5 第 5 章给出的变量限值之内。
 (This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.)

修订号(Revision No.) 1 批准(Authorized by) [Signature]
 工艺评定记录编号(PQR No.) 免除评定 Prequalification 日期(Date) 2007.3.30
 * 本 WPS 符合 AASHTO/AWS D1.5 2002, 用于桥梁结构。
 (This WPS is conformable with the current edition of AASHTO/AWS D1.5 2002, used for BRIDGE structure.)

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000255

Subject: NCR No. ZPMC-0262

Dated: 21-Dec-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000256 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing documentation to show that welds are acceptable after NDT. Based on that ZPMC requests closure of the NCR.

ZPMC is providing documentation to show that welds are acceptable after NDT. Based on that ZPMC requests closure of the NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000256R02;

Caltrans' comments:

Status: CLO

Date: 21-Dec-2009

The proposed resolution is acceptable. The Department concurs that NCR ZPMC-0262 is closed.

Submitted by: Lee, Ken

Attachment(s):

Date: 21-Dec-2009



No. T-108

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-12-21

REGARDING: NCR-000288(ZPMC-0262)

ZPMC received NCR-000288(ZPMC-0262), it mentioned that QA observed ZPMC personnel welding Type 3 strut weld ND1-A468-38-44 without enough preheat temperature in compliance with WPS-345-SMAW-2G (2F)-Repair.

For the further response of this NCR, ZPMC attached the relative MT reports for your information. Also, the subsequent CT's inspection had proved the welds complied with the requirement and were green tagged.

So ZPMC hope Caltrans could take a review and withdraw this NCR.

ATTACHMENT:

T787-MT-4470


2009-12-21



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-4470 DATE日期 2009.06.10 PAGE OF页码 1/5 Revision No: 0

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

DRAWING NO. 图号: ND1-A468
1st lifting strut 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. 28ST, 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: WELDING 焊接件
 CASTING 铸件
 FORGING 锻造 Material & thickness 母材,厚度: A709SL-Gr345/A709SL-Gr485/A709M-345F2-Z
75/60/45/28mm

WELDING PROCESS 焊接方法: SMAW 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			
ND1-A468-38M-1-1A				ACC.		100%MT
ND1-A468-38M-1-6A				ACC.		100%MT
ND1-A468-38M-1-28B				ACC.		100%MT
ND1-A468-38M-1-3A				ACC.		100%MT
ND1-A468-38M-1-26A				ACC.		100%MT
ND1-A468-38M-1-27B				ACC.		100%MT
ND1-A468-38M-1-1B				ACC.		100%MT
ND1-A468-38M-1-6B				ACC.		100%MT
ND1-A468-38M-1-28A				ACC.		100%MT
ND1-A468-38M-1-3B				ACC.		100%MT
ND1-A468-38M-1-26B				ACC.		100%MT

EXAMINED BY主探: Xu bing REVIEWED BY审核: Cai Xinxin
LEVEL - II SIGN 签名 / DATE日期: 2009.6.10 LEVEL-II SIGN / DATE日期: 09.06.10

质量经理 / QCM: Cai Jianhua 用户CUSTOMER: _____
签字 SIGN / 日期 DATE: 2009.6.15 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-4470 DATE日期 2009.06.10 PAGE OF页码 2/5 Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: ND1-A468 1st lifting strut 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	A709SL-Gr345/A709SL-Gr485/A709M-345F2-Z 75/60/45/28mm
WELDING PROCESS 焊接方法	SMAW	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			
ND1-A468-38M-1-27A				ACC.		100%MT
ND1-A468-38M-1-34				ACC.		100%MT
ND1-A468-38M-1-36				ACC.		100%MT
ND1-A468-38M-1-46				ACC.		100%MT
ND1-A468-38M-1-48				ACC.		100%MT
ND1-A468-38M-1-33				ACC.		100%MT
ND1-A468-38M-1-18				ACC.		100%MT
ND1-A468-38M-1-17				ACC.		100%MT
ND1-A468-38M-1-45				ACC.		100%MT
ND1-A468-38M-1-47				ACC.		100%MT
ND1-A468-38M-1-19				ACC.		100%MT

EXAMINED BY 主探 Xu bing <i>Xu bing</i> 2009. 6-10	REVIEWED BY 审核 <i>Cat Xinlin</i> 09. 06. 10
LEVEL - II SIGN 签名 / DATE日期	LEVEL-II SIGN / DATE日期
质量经理 / QCM <i>Lu Jianhua</i> 2009.6.15	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 T787-MT-4470 DATE日期 2009.06.10 PAGE OF页码 3/5 Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: ND1-A468 1st lifting strut 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	A709SL-Gr345/A709SL-Gr485/A709M-345F2-Z 75/60/45/28mm
WELDING PROCESS 焊接方法	SMAW	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			
ND1-A468-38M-1-20				ACC.		100%MT
ND1-A468-38M-1-35				ACC.		100%MT
ND1-A468-38M-1-38				ACC.		100%MT
ND1-A468-38M-1-37				ACC.		100%MT
ND1-A468-38M-1-14				ACC.		100%MT
ND1-A468-38M-1-13				ACC.		100%MT
ND1-A468-38M-1-43				ACC.		100%MT
ND1-A468-38M-1-44				ACC.		100%MT
ND1-A468-38M-1-40				ACC.		100%MT
ND1-A468-38M-1-39				ACC.		100%MT
ND1-A468-38M-1-16				ACC.		100%MT

EXAMINED BY 主探 Xu bing <i>Xu bing</i> 2009.6.10 LEVEL - II SIGN 签名 / DATE日期	REVIEWED BY 审核 Cai Xinyin <i>Cai Xinyin</i> 09.06.10 LEVEL-II SIGN / DATE日期
质量经理 / QCM Lu Tianhua <i>Lu Tianhua</i> 2009.6.15 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-4470 DATE日期 2009.06.10 PAGE OF页码 4/5 Revision No: 0

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

DRAWING NO. 图号: ND1-A468 1st lifting strut 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
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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 5620 5395 5617
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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 A709SL-Gr345/A709SL-Gr485/A709M-345F2-Z 75/60/45/28mm
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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			
ND1-A468-38M-1-15				ACC.		100%MT
ND1-A468-38M-1-41				ACC.		100%MT
ND1-A468-38M-1-42				ACC.		100%MT
ND1-A468-38M-1-30				ACC.		100%MT
ND1-A468-38M-1-29				ACC.		100%MT
ND1-A468-38M-1-9				ACC.		100%MT
ND1-A468-38M-1-8				ACC.		100%MT
ND1-A468-38M-1-24				ACC.		100%MT
ND1-A468-38M-1-25				ACC.		100%MT
ND1-A468-38M-1-32				ACC.		100%MT
ND1-A468-38M-1-31				ACC.		100%MT

EXAMINED BY 主探
Xu bing 2009. 6.10
LEVEL - II SIGN 签名 / DATE 日期

REVIEWED BY 审核
Car Xinan 09. 06. 10
LEVEL-II SIGN / DATE 日期

质量经理 / QCM
Wu Jianhua 2009 6.15
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-4470 DATE日期 2009.06.10 PAGE OF页码 5/5 Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: ND1-A468 1st lifting strut 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	A709SL-Gr345/A709SL-Gr485/A709M-345F2-Z 75/60/45/28mm
WELDING PROCESS 焊接方法	SMAW	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			
ND1-A468-38M-1-11				ACC.		100%MT
ND1-A468-38M-1-10				ACC.		100%MT
ND1-A468-38M-1-23				ACC.		100%MT
ND1-A468-38M-1-5				ACC.		100%MT

AFTER HSR1(T)-9046

EXAMINED BY主操 Xu bing <i>Xu bing</i> 2009. 6.10 LEVEL - II SIGN 签名 / DATE日期	REVIEWED BY 审核 <i>Cal Xue</i> 09. 06. 10 LEVEL-II SIGN / DATE日期
质量经理 / QCM <i>Lu Tianhua</i> 2009. 6. 15 签字 SIGN / 日期 DATE	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-000304**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0262**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: 03-Jun-2009**Description of Non-Conformance:**

QA observed ZPMC personnel welding Type 3 Strut weld ND1-A468-38-1-44 without preheating the weld and adjacent base material.

Contractor's proposal to correct the problem:

ZPMC stated that pre-heat will be monitored more closely.

Corrective action taken:

The affected weld has been verified with NDT and subsequently green tagged. ABF QCM has informed ZPMC QC to educate the persons performing the pre-heat of the WPS requirements to pre-heat based on material thickness and that tack welding has the same requirements as the balance of the welding. ABF QCM has explained the consequences of hydrogen embrittlement and that thicker materials should be heated from the opposite side to ensure through thickness heat distribution.

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