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-000272
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 08-May-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0246

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:** Segment 1AAW
Procedural	☐	**Procedural**	☐	**Description:**		

Reference Description: Welding With Incorrect Electrode, Welds: SEG001A-23, 24, 25 & 27

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC welding personnel performing weld repair of an SPCM using SMAW electrode THJ508Fe-1 (TL-508). The required electrode is THJ506Fe-1 (TL-506). The joint was welded using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AAW, stiffener to bottom plate welds: SEG001A-23, 24, 25 and 27.

-Stiffener material: ASTM A709M HPS 485-WT2-X-S
-Bottom plate material: ASTM A709M-Gr 345-F2
-Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Applicable reference:
WPS-345+485- SMAW-4G(4F)-FCM-Repair-2
Who discovered the problem: Chandra Sudalaimuthu
Name of individual from Contractor notified: Wang Wen Bhi
Time and method of notification: 05/07/09, 09:00, Verbal
Name of Caltrans Engineer notified: Stanley Ku, Ching Chao
Time and method of notification: 05/09/09, 16:00, Email
QC Inspector's Name: Pan Wen Long
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.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Inspected By:	Guest,Skyler	SMR
Reviewed By:	Wahbeh,Mazen	SMR

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:**	22-May-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:**	05.03.06-000237
Subject:	NCR No. ZPMC-0246		

Reference Description: Welding With Incorrect Electrode, Welds: SEG001A-23, 24, 25 & 27

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 observed ZPMC welding personnel performing weld repair of an SPCM using SMAW electrode THJ508Fe-1 (TL-508). The required electrode is THJ506Fe-1 (TL-506). The joint was welded using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AAW, stiffener to bottom plate welds: SEG001A-23, 24, 25 and 27.

-Stiffener material: ASTM A709M HPS 485-WT2-X-S
-Bottom plate material: ASTM A709M-Gr 345-F2
-Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer
Attachments: ZPMC-0246

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Ching Chao
File: 05.03.06

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000237

Subject: NCR No. ZPMC-0246

Dated: **27-May-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000241 Rev: 00**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC at the time of notification by CT of this occurrence, ZPMC began to remove the 508 filler metal from the repairs and replace with the correct 506 filler material.

ZPMC at the time of notification by CT of this occurrence, ZPMC began to remove the 508 filler metal from the repairs and replace with the correct 506 filler material. ZPMC will submit weld repair and inspection documents at a later date.

Submitted by:

Attachment(s): ABF-NPR-000241R00

Caltrans' comments:

Status: REJ

Date: 05-Jun-2009

The proposed resolution is not acceptable.

Please provide weld repair documentation showing that the weld deposited with the incorrect electrode has been completely removed. Also, provide the inspection documents verifying that the welds are acceptable. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0246 at that time.

Submitted by: Wright, Doug

Date: 05-Jun-2009

Attachment(s):

AMERICAN BRIDGE/FLUOR ENTERPRISES, a JV
P.O. BOX 23223 Oakland, CA 94623
Phone (510) 419-0120 / Fax (510) 839-0666

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000237

Subject: NCR No. ZPMC-0246

Dated: **15-Jul-2009**

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

Job Name: SAS Superstructure

Document No.: **ABF-NPR-000241 Rev: 01**

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to the NCR as stated in the attachment. ZPMC requests closure of this NCR.

ZPMC has responded to the NCR as stated in the attachment. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000241R01;

Caltrans' comments:

Status: CLO

Date: 04-Aug-2009

The proposed resolution is acceptable. The attachments include the welding repair report documenting removal of the weld deposited with the incorrect electrode. Also, the weld in question has been accepted by VT, MT, and UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0246 is closed.

Submitted by: Wright, Doug

Date: 04-Aug-2009

Attachment(s):

No. B-396

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2009-7-14

REGARDING: NCR-00272 (ZPMC-0246)

With this letter of response, ZPMC requests closure for Caltrans **NCR-00272 (ZPMC-0246).** According to the welding process inspection record, we completely removed the weld deposited with the incorrect electrode, and notify the CT prior occurrence. And then we weld repair the corresponding areas with the correct 506 filler material. In the final all the repairing welds had been verified by NDT with both ZPMC and CT.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report **NCR-00272 (ZPMC-0246).**

Please reference attached documentation for acceptance and closure the **NCR-00272 (ZPMC-0246).**

ATTACHMENT:
NCR-00272(ZPMC-0246)
ZPMC internal NCR
The welding process inspection
The welding repair report
The final VT/UT/MT inspection reports

Zhao Shuangbao

2009. 7. 14

Nonconformance Report
不符合项报告

Project Name: 项目名称:	S.F.O.B.B 美国加州海湾大桥		NCR Number: NCR 编号: NCR-B-164 (ZPMC-0246)
Item: 名称描述:	Welding with incorrect electrode 使用错误的焊条烧焊	Item Number: 件号: OBG 1AAW	Drawing: 图号: SEG1
Location: 位置:	OBG 1AAW		Date: 日期: 2009-06-03

Description of Nonconformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC welding personnel performed weld repair of an SPCM using SMAW electrode THJ508Fe-1(TL-508). The required electrode is THJ506Fe-1(TL-506). The joint was welding using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AWW, stiffener to bottom plate welds: SEG001A-23,24,25 and 27.

Stiffener material: ASTM A709M HPS 485-WT2-X-S

Bottom plate material: ASTM A709M-Gr 345-F2

Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

加洲检验员发现 ZPMC 焊工使用 THJ508F-1（TL508）的焊条烧焊返修。按要求此位置应该使用 THJ506Fe-1（TL-506）焊条。ZPMC 使用这 2 种焊条对焊缝 SEG001A-23，24，25，27 进行烧焊。

筋板材质： ASTM A709M HPS 485-WT2-X-S

底板材质： ASTM A709M-Gr 345-F2

所用的 WPS： WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Work By: 施工方: 薛保平

Prepared by: 准备: ShenXuejun 2009.6.3

Reviewed by QCE: 质量工程师批准: 陆建华 LuJianhua 09/6/3

☐ Drawing Error 图纸错误 ☐ Material Defect 材料缺陷 ■ Fabrication Error 制作错误 ☐ Other 其他原因

Disposition: 处理措施: ☐ Use as is 回用 ☑ Repair 返修 ☐ Reject 拒收

Recommendation:
建议：

严格按照 WPS 制作。培训焊工、加强监控

Perform accordg to WPS. train webler and enhance supervision

Prepared by: Du Wenlong 准备

Approved by QCA: 质量经理批准

Reason for Nonconformance:
不符合原因:

未按照WPS相关要求进行返修

Perform repair without according to WPS requirement.

Prevention of Re-occurrence:
预防措施:

① 加强对焊工的培训(WPS) 1) Train welder.

② 加强对焊工的责任心要求 2) Improve welder responsibility.

③ 安排工作时，多进行沟通。 3) Enhance communication during arrangement work

Approved by/批准:

Technical Justification for Use-As-Is/Repair: ☐ Attachment ☑ Non-attachment
回用或返修的技术依据:

将使用铸造焊材的焊缝区域去除(附件)、重新焊接(无附件)，加强现场检查力度，对相关人员进行培训。

Remove weld and re-weld, enhance supervision and train workers.

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
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: 22-May-2009

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

Job Name: SAS Superstructure

Document No: 05.03.06-000237

Dear: Mr. Charles Kanapicki

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Subject: NCR No. ZPMC-0246

Reference Description: Welding With Incorrect Electrode, Welds: SEG001A-23, 24, 25 & 27

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

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- ☐ 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 observed ZPMC welding personnel performing weld repair of an SPCM using SMAW electrode THJ508Fe-1 (TL-508). The required electrode is THJ506Fe-1 (TL-506). The joint was welded using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AAW, stiffener to bottom plate welds: SEG001A-23, 24, 25 and 27.

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-Bottom plate material: ASTM A709M-Gr 345-F2
-Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer
Attachments: ZPMC-0246

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Ching Chao
File: 05.03.06

STATE OF CALIFORNIA--BUSINESS,TRANSPORTACTION AND HOUSING AGENCY Arnold Schwarzenegger, Governor

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-000272
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 08-May-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0246

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐
Welding	☑	**Curing**	☐	**Procedural**	☐
Joint fit-up	☐	**Coating**	☐	**Other**	☐
Procedural	☐	**Procedural**	☐	**Description:**	

Bridge No: 34-0006
Component: Segment 1AAW

Reference Description: Welding With Incorrect Electrode, Welds: SEG001A-23, 24, 25 & 27

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC welding personnel performing weld repair of an SPCM using SMAW electrode THJ508Fe-1 (TL-508). The required electrode is THJ506Fe-1 (TL-506). The joint was welded using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AAW; stiffener to bottom plate welds: SEG001A-23, 24, 25 and 27.

-Stiffener material: ASTM A709M HPS 485-WT2-X-S
-Bottom plate material: ASTM A709M-Gr 345-F2
-Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Applicable reference:
WPS-345+485- SMAW-4G(4F)-FCM-Repair-2
Who discovered the problem: Chandra Sudalaimuthu
Name of individual from Contractor notified: Wang Wen Bhi
Time and method of notification: 05/07/09, 09:00, Verbal
Name of Caltrans Engineer notified: Stanley Ku, Ching Chao
Time and method of notification: 05/09/09, 16:00, Email
QC Inspector's Name: Pan Wen Long
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.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Inspected By:	Guest,Skyler	SMR
Reviewed By:	Wahbeh,Mazen	SMR

焊缝返修报告
Welding Repair Report

版本 Rev. No.
0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SEG1	报告编号 Report No.	B-WR5409
合同号 Contract No.:	04-0120F4	部件名称 Items Name	OBG FLOOR BEAM	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述：

Description of welding discontinuity:

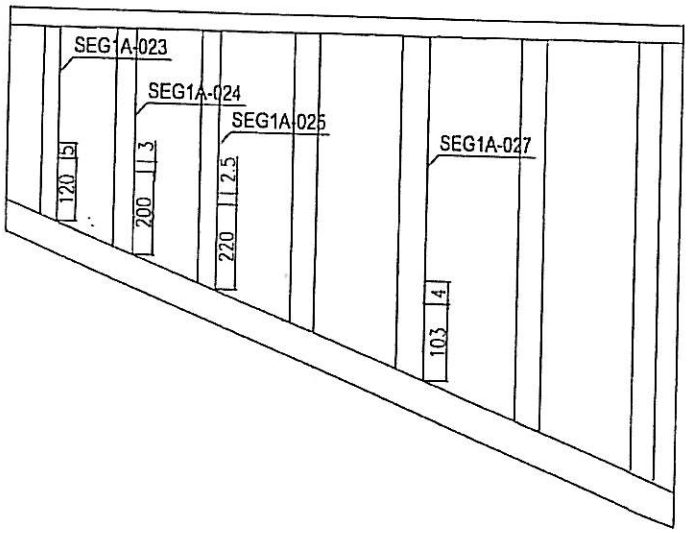
胡国兴施工队1AAW,SEG1A-023,长度为5mm，SEG1A-024,长度3mm，SEG1A-025,长度为2.5mm，SEG1A-`027,长度为4mm返修时按板材应用THJ506Fe-1，实际错用的TL-508.

1AAW fabricated by work team:Hu Guoxing, the weld metal was error used as TL-508, which shall be THJ506Fe-1, 5mm in length on weld SEG1A-023, 3mm in length on weld SEG1A-024, 2.5m on weld SEG1A-025.

检验员（Inspector）：Xiang Fengfeng 日期(Date)：09.06.10

焊缝返修位置示意图：

Draft of welding discontinuity:



产生原因:

Caused:

在补焊时，焊工疏忽，将焊条用错。

Welder wasn't carefully caused electrode error.

车间负责人(Foreman): [signature] 日期(Date): 09.06.10

处理意见

Disposition :

1. 将补焊材质用错的区域采用碳刨、打磨的方法去除补焊材质用错的区域，碳刨前根据相应返修WPS进行预热；
2. 准备好正确的接头型式，具体参照返修WPS；
3. 将碳刨区域打磨光滑；
4. 根据批准的返修焊接工艺规程（WPS）进行预热及焊接；
5. 将焊缝打磨使与邻近焊缝平齐；
6. 根据批准的车间图纸要求对焊缝检查；

1. Gouge or grind the area where the weld metal was error used as TL-508. Preheat prior to g ouging according to the relevant WPS.
2. Prepare excavation according to the relevant repair WPS.
3. Grind the gouged area smoothly;
4. Preheat and weld according to the relevant repair WPS.
5. Grind the weld flush with the adjacent weld.
6. Perform NDT according to the working drawings.

工 艺: Technical engineer [signature]

审核: Approved by [signature]

日期 Date 09.06.10

焊缝返修报告
Welding Repair Report

版本 Rev. No.: 0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No.	SEG1	报告编号 Report No.	B-WR5409
合同号 Contract No.:	04-0120F4	部件名称 Items Name	OBG FLOOR BEAM	NDT报告编号 Report No.of NDT	NA
项目编号 Project No.:	ZP06-787				

纠正措施:.

Corrective action to prevent re occurrence:

培训和教育焊工，加强对焊工的监控。

Train and educate welder and enhance supervision.

车间负责人(Foreman): 日期(Date):2009. 06.10

参照的WPS编号 Repair WPS No.	WPS-345+485-SM AW-4G(4F)-Repair -2	工艺员 technologist	Nin tie fei 06.10
返修（碳刨）前预热温度 Preheat temperature before gouging	97°C	返修的缺陷 Description of discontinuity	wrong welding metal
焊前处理检查 Inspection before welding	Acc	焊前预热温度 Preheat temperature before welding	165°C
最大碳刨深度 Max. depth of gouging	6mm	碳刨总长 Total length of gouging	17mm

焊工 welder	045268	焊接类型 welding type	SMAW	焊接位置 position	4G
焊接电流 Current	175	焊接电压 Voltage	25	焊接速度 Speed	150

返修后检查
Inspection After repairing:

外观检查 VT result	Acc	检验员 Inspector		日 期 Date	2009.6.15
NDT复检 NDT result	NT Acc MT Acc	探伤员 NDT person		日 期 Date	6/18

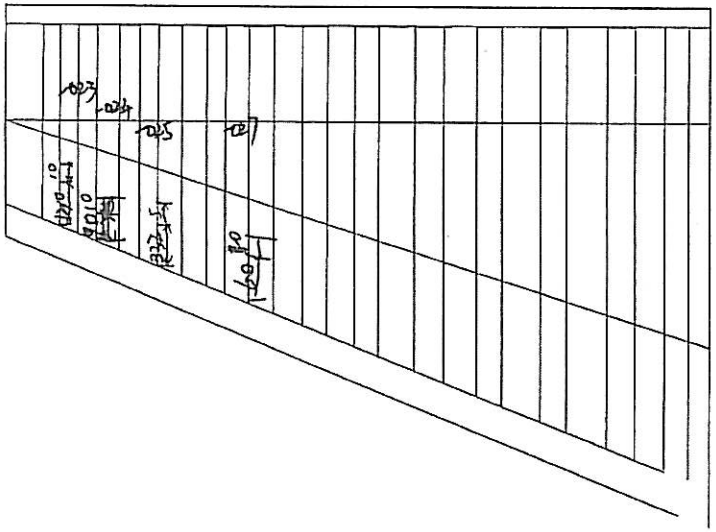
见证：
Witness/Review: 6/19

备注：
Remark：

美国钢桥焊接过程检查记录卡
The welding process inspection

桥段名称: Section name: 1HAW

工程编号: The serial no. of project:	图号: The drawing no. :	构件名称: The part name. :	炉批号: The heatno of plate :	钢板编号: Plate ID :
ZPMC06-787	SEG1A	1AA		



焊缝位置草图 Weld position draft:

焊道布置图 Weld passes draft:

检查项目 Checking item:	焊缝编号 Weld no.	SEG1A 焊道编号 The weld pass no.									
焊道编号 The weld pass no.:	023	024	025	027							
焊接时间 The welding time:	2009.5.7	2009.5.7	2009.5.7	2009.5.7							
电流 Electric current:	150	145	157	153							
电压 Voltage:	25	26	25	26							
速度 Welding speed:	120	127	126	127							
层间温度 Process temperature	104℃	110℃	107℃	119℃							

焊缝形式 Welding Type:	4G	
焊接方法 Welding method:	SMAW	执行WPS编号 WPS no.: WPS-345-SMAW-4GC4FJ-Rejoin'r
焊缝道数 Total welds:		
焊丝牌号 Electrode brand:	TL-508	
焊剂牌号 Flux brand:		

焊工Welder: XuFubao 200569　　检验员Inspector: 王建峰　　日期Date: 2009.5.7

B-VT 31082

ZPMC

周数 85#

日期 2009.06.13

Visual Weld Inspection Report
焊缝目视检查报告

Caltrans Contract No. 加州合同编号	04-0120F4	Girder/ 梁:	OBG Floor Beam
Project No.: 项目名称	San Francisco Oakland Bay Bridge 美国海湾大桥	Tower/ 塔:	
Project No.: 项目编号:	ZP06-787	Quality Control Representative: 质检代表:	
		CWI: 检验员:	Whjieng 07.06.13
		Quality Assurance Manager ~Approval 质量控制经理:	

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
SEG1A-023	045268	4G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA
SEG1A-024	045268	4G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA
SEG1A-025	045268	4G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA
SEG1A-027	045268	4G	THJ506Fe-1	√	√	√	√	√	√	√	ACC	NA	NA

☐ After root weld

☑ After CWR or WRR No. :B-WR5409

☐ After cover pass

☐ After HSR No. :

☐ Others

#R787-QCP-603

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

REPORT OF ULTRASONIC EXAMINATION
UT探伤报告

REPORT NO. 报告编号 B787-UT-7569	DATE 2009.06.18	PAGE 1 OF 1	Revision No: 0

PROJECT NO. :工程编号 ZP06-787		CONTRACTOR : CALTRANS
ITEMS NAME: 部件名称 OBG PLATE PANEL SPLICE	DRAWING NO.: 图号 SEG1A	CALTRANS CONTRACT NO.: 04-0120F4 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
SMAW	T-JOINT	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 IIW BLOCK TYPE II	C.M.C	A709M-345/A709M-HPS-485WT2-Z 20/38mm	

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	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		
SEG1A-023		70				34								ACC.	100%
SEG1A-024		70				34								ACC.	100%
SEG1A-025		70				34								ACC.	100%
SEG1A-027		70				34								ACC.	100%
AFTER B-WR5409															
BLANK															

EXAMINED BY主探	REVIEWED BY 审核
Sun yin	
LEVEL - II SIGN / DATE 09.06.18	LEVEL - II SIGN / DATE 09.06.18
质量经理 / QCM	用户CUSTOMER
签字 SIGN / 日期 DATE	签字 SIGN / 日期 DATE

(FORM# ZPQC-UT01)

ZPMC

REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 B787-MT-12199	DATE日期 2009.06.19	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:	SEG1 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. 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 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	√ WELDING 焊接件 □ CASTING 铸件 □ FORGING 锻造	Material & thickness 母材,厚度	A709M-345 A709M-HPS-485WT2-Z 20/38 mm
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			
SEG1A-023				ACC.		100%MT
SEG1A-024				ACC.		100%MT
SEG1A-025				ACC.		100%MT
SEG1A-027				ACC.		100%MT
AFTER B-WR5409						
BLANK						

EXAMINED BY主探 Fu zhi qiang LEVEL - II SIGN 签名 Fuzhiqiang / DATE日期 09.06.19	REVIEWED BY 审核 Wangwei LEVEL-II SIGN / DATE日期 09.6.19
质量经理 / QCM 签字 SIGN / 日期 DATE	用户CUSTOMER 签字 SIGN / 日期 DATE

(FORM# ZPQC-MT01)

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 #: xx.25A

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

Location: Changxing Island, Shanghai, PRC **Report No:** NCS-000264
Prime Contractor: American Bridge/Fluor Enterprises, a JV **Date:** 24-Aug-2009
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0246

Type of problem:

Welding	☑	**Concrete**	☐	**Other**	☐	
Welding	☑	**Curing**	☐	**Procedural**	☐	**Bridge No:** 34-0006
Joint fit-up	☐	**Coating**	☐	**Other**	☐	**Component:**
Procedural	☐	**Procedural**	☐	**Descripton:**		

Date the Non-Conformance Report was written: 08-May-2009

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC welding personnel performing weld repair of an SPCM using SMAW electrode THJ508Fe-1 (TL-508). The required electrode is THJ506Fe-1 (TL-506). The joint was welded using a combination of both TL-508 and TL-506. The welding occurred on Segment 1AAW, stiffener to bottom plate welds: SEG001A-23, 24, 25 and 27.

-Stiffener material: ASTM A709M HPS 485-WT2-X-S
-Bottom plate material: ASTM A709M-Gr 345-F2
-Approved WPS for the repair welding: WPS-345+485 SMAW-4G(4F)-FCM-Repair-2

Contractor's proposal to correct the problem:

Remove and replace welds, and perform subsequent NDT.

Corrective action taken:

Contractor submitted WRR as well as VT, MT, and UT reports verifying repair was performed in accordance with Contract specifications.

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

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

Reviewed By: Wahbeh,Mazen QA Reviewer