

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, P.R. China**Report No:** NCS-000523**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 11-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0522**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: 16-Dec-2009**Description of Non-Conformance:**

During the Caltrans Quality Assurance (QA) Inspectors Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7CW at panel point 54 (PP54), the QA inspector discovered the following issue:

- One (1) Longitudinal linear indication measuring approximately 30mm.
- The American Weld Society (AWS) Table 6.3 indication rating is a +8 (class A).
- The depth from face A is approximately 8mm.
- The material thickness is 12 mm.
- The weld joint is identified as: SSD13A-PP54-007
- The weld is a Complete Joint Penetration (CJP) butt joint.
- The CJP weld joins Floor Beam (FB15A) to Corner Assembly (CA38A).
- The segment is located outside south of blast Bay 1.
- The Notice of Witness Inspection number is 004866.
- The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC). As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor has submitted WRR along with subsequent NDT report verifying the weld is now in conformance with Contract specifications. Additional training was also provided for NDT Technicians in regards to this issue.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

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 152. 1675.3703, who represents the Office of Structural Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer



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: 24-Dec-2009

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0522

Job Name: SAS Superstructure
Document No: 05.03.06-000510

Reference Description: Missed UT Indication by QC, Segment 7CW

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:** 07

Remarks:

During the Caltrans Quality Assurance (QA) Inspectors Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7CW at panel point 54 (PP54), the QA inspector discovered the following issue:

- One (1) Longitudinal linear indication measuring approximately 30mm.
- The American Weld Society (AWS) Table 6.3 indication rating is a +8 (class A).
- The depth from face A is approximately 8mm.
- The material thickness is 12 mm.
- The weld joint is identified as: SSD13A-PP54-007
- The weld is a Complete Joint Penetration (CJP) butt joint.
- The CJP weld joins Floor Beam (FB15A) to Corner Assembly (CA38A).
- The segment is located outside south of blast Bay 1.
- The Notice of Witness Inspection number is 004866.
- The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC). As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Missed indications are a chronic problem. Provide adequate training or equipment to the ZPMC technician to ensure class A indications are not missed. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0522

NCT

(*Continued Page 2 of 2*)

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, 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: 05.03.06-000510

Subject: NCR No. ZPMC-0522

Dated: 18-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000522 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: As a means of preventing future occurrences, the ABF QCM has performed refresher UT training. See attached UT training agenda and attendance roster.

As it is necessary to respond to the NCR with a proposed plan of action, ABF is doing so without all of the repair documentation at this time. As a means of preventing future occurrences, the ABF QCM has performed refresher UT training. See attached UT training agenda and attendance roster. The ABF QCM has been discussing missed UT indications with the ZPMC QCM and related NDT supervisory personnel. The ZPMC level III is in the process of assessing personnel, techniques and equipment. ABF has purchased GE Technology transducers to distribute to both ZPMC and ABF UT personnel in a cooperative effort to match the equipment of CT. These transducers will arrive to the job site approximately the end of January 10 at which time they will be put into immediate use. ZPMC requests this NCR be placed in the Approved Action Pending status category until such time that all the repair documents have been assembled and submitted.

Submitted by: Lawton, Steve

Attachment(s): ABF-NPR-000522R00;

Caltrans' comments:

Status: AAP

Date: 25-Jan-2010

The preventative measures taken by the QCM and the proposed resolution for closing NCR submitted by the contractor are acceptable. The NCR will be closed upon completion of the repair and review of the repair documents by the Engineer when submitted by the contractor.

Submitted by: Chao, Ching

Attachment(s):

Date: 25-Jan-2010

UT Refresher Training Agenda

Subject: UT Techniques

Reason for Training: Several CT NCR's for missed UT indications

1. Safety

- a. Safety Glasses
- b. Gloves (if required)
- c. Knee Pads
- d. Electrical Shock

2. Tools

- a. Calibrated UT Machine condition of machine
- b. Coaxial cable condition of cable
- c. Transducer condition of transducer
- d. IIW Block
- e. Scraper
- f. UT couplant

3. Inspection Techniques

- a. Surface preparation
- b. Location of weld UT from beveled plate
- c. Scanning patterns
- d. Correct choice of Angles
- e. Calibration per ZPMC procedure at regular intervals
- f. Scanning speed
- g. Know where your sound is at.... First leg, second leg etc...

4. Inspection Criteria

- a. Table 6.3 or Table 6.4
- b. Are surface inspections complete VT and or MT should always occur before UT
- c. Scanning Levels
- d. Criteria dictated by the thinner of the two members
- e. Planar flaws



教育培训纪录

培训编号:

培训内容:	UT复习培训教程 UT Techniques
培训对象:	ZPMC UT GUYS
授课人员:	STEVE LAWTON
培训类型:	UT Refresher Training Agenda
培训时间:	2009. 12. 24. 16:30
计划培训地点:	ZPMC NDT OFFICE

人员签到:

姓名	部门	姓名	部门
戴建 dai jian	江江 Jiang Jiang		
薛宇 xue yu	黄廷 Huang Ting		
马志长 ma zhi chang	黄廷 Huang Ting		
谭善 tan shan	李黎明 Li Liming		
马健 ma jian	李黎明 Li Liming		
王福 wang fu	徐军 Xu Jun		
沈健 shen jian	李黎明 Li Liming		
黄江 Huang Jiang			
金峰 jin feng			
吴文 wu wen			
解文 jie wen			
周海周 zhou hai zhou			
徐峰 xu feng			

NCR PROPOSED RESOLUTION

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

Dated: 24-Feb-2010

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Document No.: ABF-NPR-000522 Rev: 01

Ref: 05.03.06-000510

Subject: NCR No. ZPMC-0522

Contractor's Proposed Resolution:

Reference Resolution: ZPMC is providing the weld repair report and subsequent NDT to show that the missed indication was removed and the weld is successful. Based on this ZPMC requests closure of this NCR.

ZPMC is providing the weld repair report and subsequent NDT to show that the missed indication was removed and the weld is successful. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000522R01

Caltrans' comments:

Status: REJ

Date: 24-Feb-2010

No information was attached to this NPR.

Submitted by: Howe, Bill

Date: 24-Feb-2010

Attachment(s):

NCR PROPOSED RESOLUTION

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

Dated: 02-Mar-2010

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Document No.: ABF-NPR-000522 Rev: 02

Ref: 05.03.06-000510

Subject: NCR No. ZPMC-0522

Contractor's Proposed Resolution:

Reference Resolution: Attached is the documentation referenced in ABFJV's closure request. Based on this ZPMC requests closure of this NCR.

Attached is the documentation referenced in ABFJV's closure request. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000522R02;

Caltrans' comments:

Status: CLO

Date: 07-Mar-2010

The documentation received is sufficient to close this NCR.

Submitted by: Howe, Bill

Date: 07-Mar-2010

Attachment(s):



No. B-615

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-2-22

REGARDING: NCR-000549(ZPMC-0522)

With this letter of response, ZPMC requests closure of CT NCR-000549(ZPMC-0522) what mentioned that CT inspector observed missed UT indication by ZPMC QC.

- WWR was issued reflecting to the confirmed UT indication in SSD13A-PP54-007. See attached B-WR9274.
- UT was performed to warrant the weld's quality after repair.
- To improve the UT technique, refresh training was performed to ZPMC's UT personnel by ABF QCM.

Base on the taken actions and attached documentations, ZPMC requests closure of this NCR.

ATTACHMENT:

NCR-000549(ZPMC-0522)

B-WR9274

B787-UT-10238

B787-UT-10238R1

Jan
2/22/21



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: 24-Dec-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: 05.03.06-000510

Subject: NCR No. ZPMC-0522

Reference Description: Missed UT Indication by QC, Segment 7CW

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: 27

Remarks:

During the Caltrans Quality Assurance (QA) Inspectors Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7CW at panel point 54 (PP54), the QA inspector discovered the following issue:

- One (1) Longitudinal linear indication measuring approximately 30mm.
- The American Weld Society (AWS) Table 6.3 indication rating is a 1B (Class A).
- The depth from face A is approximately 8mm.
- The material thickness is 12 mm.
- The weld joint is identified as: SSD13A-PP54-007
- The weld is a Complete Joint Penetration (CJP) butt joint.
- The CJP weld joins Floor Beam (FB15A) to Corner Assembly (CA38A).
- The segment is located outside south of blast Bay 1.
- The Notice of Witness Inspection number is 004866.
- The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC). As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Action Required and/or Action Taken:

Submit a repair procedure to the engineer for approval. Missed indications are a chronic problem. Provide adequate training or equipment to the ZPMC technician to ensure class A indications are not missed. A response for the resolution of this issue is expected within 14 days.

Transmitted by: Bill Howe

Attachments: ZPMC-0522

NCT

(Continued Page 2 of 2)

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

ZEON PDF DRIVER TRIAL
www.zeon.com.tw

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-000549**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 16-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0522**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description: **Bridge No:** 34-0006**Component:** OBG Segment 7CW**Reference Description:** Missed UT Indication by QC, Segment 7CW**Description of Non-Conformance:**

During the Caltrans Quality Assurance (QA) Inspectors Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7CW at panel point 54 (PP54), the QA inspector discovered the following issue:

-One (1) Longitudinal linear indication measuring approximately 30mm.

-The American Weld Society (AWS) Table 6.3 indication rating is a +8 (class A).

-The depth from face A is approximately 8mm.

-The material thickness is 12 mm.

-The weld joint is identified as: SSD13A-PP54-007

-The weld is a Complete Joint Penetration (CJP) butt joint.

-The CJP weld joins Floor Beam (FB15A) to Corner Assembly (CA38A).

-The segment is located outside south of blast Bay 1.

-The Notice of Witness Inspection number is 004866.

-The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC). As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Applicable reference:

AWS D1.5-02 Section 6.6.2 "The Contractor shall be responsible for visual inspection and NDT described in 6.7 and necessary correction of all deficiencies in materials and workmanship in conformance with the requirements of Clause 3 and 6.26 and as specified elsewhere in the contract documents."

AWS D1.5-02 Section 6.26.3.1 "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3. (Table 6.3 specifies a class "A" indication as having a db rating of 10dbs or less for weld thicknesses from 8mm to 20mm) any indication in this category shall be rejected (regardless of length)."

Who discovered the problem: Larry Viars
Name of individual from Contractor notified: Li Man Kit
Time and method of notification: 1700 hours, 12-16-09, Verbal
Name of Caltrans Engineer notified: Bill Howe
Time and method of notification: 0800 hours, 12-18-09, Verbal
QC Inspector's Name: Zhang Wei
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, 15000422372, who represents the Office of Structural Materials for your project.

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



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SSD13A	报告编号 Report No.	B-WR9274
合同号 Contract No.	04-0120F4	部件名称 Items Name	7CW CORNER ASS SEMBLY AND FLOO R BEAM	NDT报告编号 Report No.of NDT	B787-UT-10238
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of welding discontinuity:

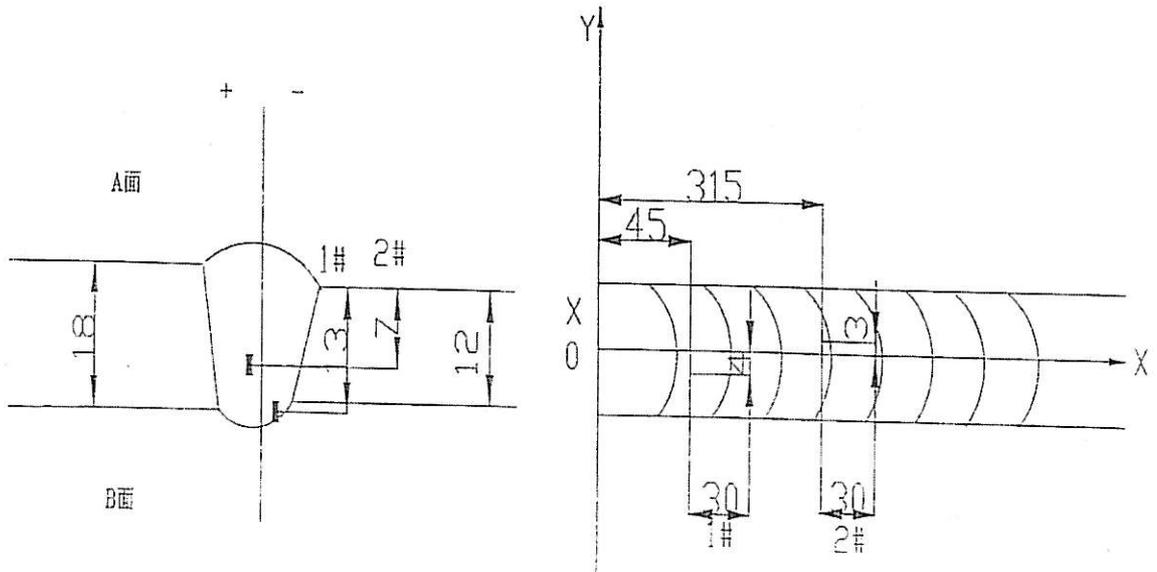
Rejected indication found by ultrasonic inspection is less than the maximum allowance aggregate length.

(UT探伤发现的缺陷总长度小于最大允许长度。) SSD13A-PP54-007

检验员 (Inspector): Jin Feng 日期(Date): 09.12.18

焊缝返修位置示意图:

Draft of welding discontinuity:



WELD NUMBER: SSD13A-PP54-007

产生原因:

Caused:

1、焊道未及时处理干净。

1. Did not clear the weld pass completely in time.

车间负责人(Foreman): *Huyuzhang*

日期(Date): *09.12.20*

处理意见

Disposition :

1. 从缺陷距离端面较近一侧 ($D \leq 0.65T$, D为缺陷深度, T为板厚) 采用碳刨或打磨的方法去除焊缝缺陷;
2. 参照返修焊接工艺规程 (WPS) 准备正确的接头型式, 预热和焊接;
3. 焊前对修补区域进行VT检测保证缺陷完全被消除;
4. 将修补区域打磨到与母材或邻近焊缝平齐;
5. 对焊缝进行UT检测, 检测范围为返修区域以及其两端各延长50mm。

1. Gouge or grind from nearer side from metal edge ($D \leq 0.65T$, "D" is depth of defects, "T" is thickness of metal) to remove all defects;
2. Follow repair WPS for joint preparation, preheat, and weld deposit;
3. Verify with VT no defects remain in the weld joint prior to welding;
4. Grind the repaired area flush with base metal or the adjacent weld;
5. Perform UT inspection to the weld along with 50mm on each end of the repair area.

工艺: *H2CaoLin*
Technical engineer *2009.12.20*

审核: *Lin Jiantu*
Approved by

日期 *10.11.15*
Date



焊缝返修报告

版本 Rev. No.

Welding Repair Report

0

项目名称 Project Name	美国海湾大桥 SFOBB	部件图号 Drawing No	SSD13A	报告编号 Report No.	B-WR9274
合同号 Contract No.:	04-0120F4	部件名称 Items Name	7CW CORNER ASS EMBL Y AND FLOO R BEAM	NDT报告编号 Report No.of NDT	B787-UT-10238
项目编号 Project No.:	ZP06-787				

纠正措施:

Correction action to prevent re occurrence:

1. 加强焊接监控和道间清理。

1. Improve monitoring of welding and interpass cleaning.

车间负责人(Foreman): *Huoyuzhang*日期(Date): *2009.12.20*

参照的WPS编号 Repair WPS No.	WPS-345-SMAW-3 G(3F)-Repair WPS-345-FCAW-3 G(3F)-Repair	工艺员 technologist	<i>Hexiaolin</i> <i>2009.12.20</i>
返修(碳刨)前预热温度 Preheat temperature before gouging	<i>NA</i>	返修的缺陷 Description of discontinuity	<i>SL</i>
焊前处理检查 Inspection before welding	<i>AN</i>	焊前预热温度 Preheat temperature before welding	<i>110°C</i>
最大碳刨深度 Max. depth of gouging	<i>7mm</i>	碳刨总长 Total length of gouging	<i>150mm</i>
焊工 welder	<i>037996</i>	焊接类型 welding type	<i>SMAW</i>
焊接电流 Current	<i>149</i>	焊接电压 Voltage	<i>21.5</i>
		焊接位置 position	<i>3G</i>
		焊接速度 Speed	<i>104</i>
返修后检查 Inspection After repairing:			
外观检查 VT result	<i>AN</i>	检验员 Inspector	<i>Lifankun</i> <i>01120701</i>
NDT复检 NDT result	<i>AN</i>	探伤员 NDT person	<i>Jin Feng</i>
日期 Date		日期 Date	<i>2010.1.8</i>
见证: Witness/Review:			
备注: Remark:			



REPORT OF ULTRASONIC EXAMINATION

UT探伤报告

REPORT NO. 报告编号 B787-UT-10238 DATE 2009.12.18 PAGE 1 OF 3 Revision No: 0

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

ITEMS NAME: 7CW CORNER ASSEMBLY AND FLOOR BEAM DRAWING NO.: SSD13(A) SSD14(A) 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
 FCAW 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-X 18/14/12mm

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		
SSD14-PP53-002	1	70	A	1	41	32	2	+7	30	45	7	-5	210	REJ.	100%
SSD14-PP53-009	1	70	A	1	40	32	1	+7	30	37	13	+5	415	REJ.	100%
	2	70	A	1	41	32	1	+8	30	34	12	+7	1035	REJ.	100%
SSD14A-PP53-002	1	70	A	2	44	32	4	+8	30	69	8	+3	125	REJ.	100%
SSD14A-PP53-007	1	70	A	2	42	32	3	+7	30	59	8	+4	405	REJ.	100%
	2	70	A	2	43	32	3	+8	30	59	8	-5	515	REJ.	100%
	3	70	A	2	43	32	3	+8	30	61	5	-4	615	REJ.	100%
	4	70	A	2	43	32	4	+7	30	71	7	-1	695	REJ.	100%

EXAMINED BY 主探 Jin Feng 2009.12.18 REVIEWED BY 审核 Xu Ronggang 2009.12.18
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM 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 B787-UT-10238

DATE 2009.12.18

PAGE 2 OF 3

Revision No: 0

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		
SSD13-PP54-002	1	70	A	1	40	32	1	+7	30	31	11	-7	80	REJ.	100%
	2	70	A	1	41	32	1	+8	30	32	12	-4	125	REJ.	100%
	3	70	A	1	41	32	1	+8	30	35	13	-2	295	REJ.	100%
SSD13-PP54-009	1	70	A	1	40	32	1	+7	30	31	11	0	815	REJ.	100%
SSD13A-PP54-002	1	70	A	2	42	32	3	+7	30	58	13	0	495	REJ.	100%
SSD13A-PP54-007	1	70	A	2	43	32	3	+8	30	58	13	-4	45	REJ.	100%
	2	70	A	2	44	32	4	+8	30	69	7	+3	315	REJ.	100%
SSD14-PP55-002	1	70	A	1	41	32	2	+7	30	45	15	+2	145	REJ.	100%
SSD14-PP55-009	1	70	A	1	40	32	1	+7	30	37	13	+4	215	REJ.	100%
	2	70	A	2	41	32	2	+7	30	50	10	+5	605	REJ.	100%
SSD14A-PP55-002	1	70	A	1	42	32	2	+8	30	45	15	-2	115	REJ.	100%
	2	70	A	1	41	32	1	+8	30	33	12	-3	225	REJ.	100%
	3	70	A	2	43	32	4	+7	30	73	6	+5	325	REJ.	100%
	4	70	A	2	41	32	3	+6	30	67	9	+3	395	REJ.	100%
	5	70	A	1	36	32	2	+2	30	44	14	-2	445	REJ.	100%
	6	70	A	2	40	32	4	+4	30	78	5	-3	495	REJ.	100%
	7	70	A	2	38	32	3	+3	30	58	13	+3	575	REJ.	100%
SSD14A-PP55-007	1	70	A	1	36	32	2	+2	30	47	14	+4	205	REJ.	100%
	2	70	A	2	40	32	4	+4	30	79	5	+3	415	REJ.	100%
SSD14-PP53-003	1	70	A	1	41	32	1	+8	30	34	12	-5	95	REJ.	100%
SSD14A-PP53-003		70				32								ACC.	100%
SSD13-PP54-003	1	70	A	1	42	32	1	+9	30	32	11	-7	80	REJ.	100%

EXAMINED BY 主探

Jin Feng 2009.12.18

LEVEL - II SIGN / DATE

REVIEWED BY 审核

Xu Ronggang 2009.12.18

LEVEL - II SIGN / DATE

质量经理 / QCM

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 B787-UT-10238

DATE 2009.12.18

PAGE 3 OF 3

Revision No: 0

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		
SSD13A-PP54-003	1	70	A	2	41	32	3	+6	30	65	8	-7	75	REJ.	100%
SSD14-PP55-003	1	70	A	2	42	32	3	+7	30	64	7	-4	105	REJ.	100%
SSD14A-PP55-003	1	70	A	2	43	32	4	+7	30	71	5	-6	70	REJ.	100%

BLANK

EXAMINED BY主探

JinFeng 2009.12.18

LEVEL - II SIGN / DATE

REVIEWED BY 审核

Xu Konggang 2009.12.18

LEVEL - II SIGN / DATE

质量经理 / QCM

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 B787-UT-10238R1 DATE 2010.01.08 PAGE 1 OF 3 Revision No: 0

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

ITEMS NAME: 7CW CORNER ASSEMBLY AND FLOOR BEAM DRAWING NO.: SSD13(A) SSD14(A) 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
 SMAW BUTT Dec. 28ST, 2010

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-X 18/14/12mm

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
SSD14-PP53-002	1R1	70				32									ACC.	100%
SSD14-PP53-009	1R1	70				32									ACC.	100%
	2R1	70				32									ACC.	100%
SSD14A-PP53-002	1R1	70				32									ACC.	100%
SSD14A-PP53-007	1R1	70				32									ACC.	100%
	2R1	70				32									ACC.	100%
	3R1	70				32									ACC.	100%
	4R1	70				32									ACC.	100%

EXAMINED BY 主探 Jin Feng 2010.01.08 REVIEWED BY 审核 Xue Han 2010.01.08
 LEVEL - II SIGN / DATE LEVEL - II SIGN / DATE

质量经理 / QCM 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 B787-UT-10238R1 DATE 2010.01.08 PAGE 2 OF 3 Revision No: 0

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		
SSD13-PP54-002	1R1	70				32								ACC.	100%
	2R1	70				32								ACC.	100%
	3R1	70				32								ACC.	100%
SSD13-PP54-009	1R1	70				32								ACC.	100%
SSD13A-PP54-002	1R1	70				32								ACC.	100%
SSD13A-PP54-007	1R1	70				32								ACC.	100%
	2R1	70				32								ACC.	100%
SSD14-PP55-002	1R1	70				32								ACC.	100%
SSD14-PP55-009	1R1	70				32								ACC.	100%
	2R1	70				32								ACC.	100%
SSD14A-PP55-002	1R1	70				32								ACC.	100%
	2R1	70				32								ACC.	100%
	3R1	70				32								ACC.	100%
	4R1	70				32								ACC.	100%
	5R1	70				32								ACC.	100%
	6R1	70				32								ACC.	100%
	7R1	70				32								ACC.	100%
SSD14A-PP55-007	1R1	70				32								ACC.	100%
	2R1	70				32								ACC.	100%
SSD14-PP53-003	1R1	70				32								ACC.	100%
SSD13-PP54-003	1R1	70				32								ACC.	100%
SSD13A-PP54-003	1R1	70				32								ACC.	100%

EXAMINED BY 主探
Jin Feng 2010.01.08
 LEVEL - II SIGN / DATE

REVIEWED BY 审核
Xue Mabing 2010.01.08
 LEVEL - II SIGN / DATE

质量经理 / QCM

 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, P.R. China**Report No:** NCS-000523**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 11-Mar-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0522**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: 16-Dec-2009**Description of Non-Conformance:**

During the Caltrans Quality Assurance (QA) Inspectors Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7CW at panel point 54 (PP54), the QA inspector discovered the following issue:

- One (1) Longitudinal linear indication measuring approximately 30mm.
- The American Weld Society (AWS) Table 6.3 indication rating is a +8 (class A).
- The depth from face A is approximately 8mm.
- The material thickness is 12 mm.
- The weld joint is identified as: SSD13A-PP54-007
- The weld is a Complete Joint Penetration (CJP) butt joint.
- The CJP weld joins Floor Beam (FB15A) to Corner Assembly (CA38A).
- The segment is located outside south of blast Bay 1.
- The Notice of Witness Inspection number is 004866.
- The indication is located in an area previously tested and accepted by ZPMC Quality Control (QC). As per the contract documents, ZPMC's QC personnel are required to perform 100% UT inspection of this weld.

Contractor's proposal to correct the problem:

Repair said indication and perform NDT required to verify weld quality.

Corrective action taken:

Contractor has submitted WRR along with subsequent NDT report verifying the weld is now in conformance with Contract specifications. Additional training was also provided for NDT Technicians in regards to this issue.

Did corrective action require Engineer's approval?

QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

(Continued Page 2 of 2)

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 152. 1675.3703, who represents the Office of Structural Materials for your project.

Inspected By: Simonis,Jim

Quality Assurance Inspector

Reviewed By: Wahbeh,Mazen

QA Reviewer