

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-000843**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 19-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0805**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: Doubler Plate to Backfill Plate
Procedural	Procedural	Description:	

Reference Description: North Tower Lift 3: Missed UT Indication at 89m**Description of Non-Conformance:**

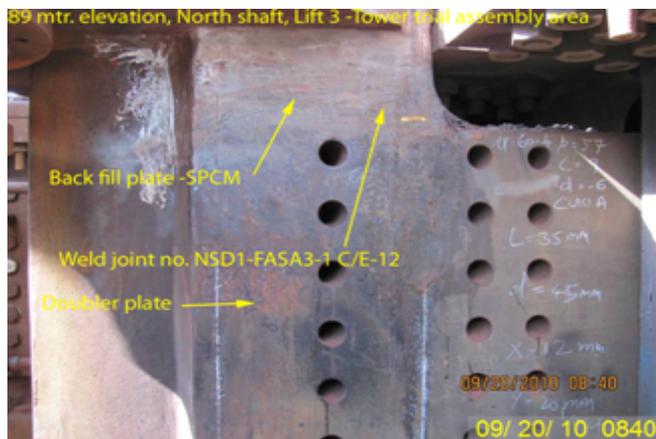
During random 10% verification of Ultrasonic Testing (UT) of Doubler Plate to Backfill Plate, this Quality Assurance Inspector (QA) discovered the following issue:

- One Class "A" non conforming longitudinal indication measuring approximately 35 mm in length found in 89 m elevation of North shaft, Lift3, between Doubler plate and Back fill plate.
- The weld is a complete joint penetration (CJP) Butt joint, and is identified as NSD1 – FASA3-1 C/E – 12.
- The discontinuity rating is Class "A" reject (DB rating -5).
- The back fill plate member is identified as Seismic performance critical member (SPCM)
- Depth of the discontinuity from face A is approximately 45 mm, and Y location found to be 18 mm from Tower Strut side.
- The Material thickness is 50 mm.
- The member is located in Tower Trial assembly area, Heavy Dock Jetty.
- The indication was discovered in an area which had been previously tested and accepted by ZPMC QC UT technicians.
- The NDT Inspection notification Number is 06711.

For further information, please see the attached pictures below.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 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:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3...(2) Welds subject to compressive stress shall conform to the requirements of Table 6.4."

AWS D1.5-02 Section 6; Table 6.4 specifies welds >38mm through 60mm having a dbb rating of -2 and lower being a class A indication. Any indication in this category shall be rejected.

Who discovered the problem: Baskar Govindarajan

Name of individual from Contractor notified: Bi De wei

Time and method of notification: 1435Hrs, 09/19/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300Hrs, 09/20/10, Verbal

QC Inspector's Name: Mr. Zhao Chen Sun

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Ng,Michael

QA Inspector

Reviewed By: Devey,Jim

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: 21-Sep-2010

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-0805

Job Name: SAS Superstructure
Document No: 05.03.06-000800

Reference Description: North Tower Lift 3: Missed UT Indication at 89m

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:** 03

Remarks:

- During random 10% verification of Ultrasonic Testing (UT) of Doubler Plate to Backfill Plate, this Quality Assurance Inspector (QA) discovered the following issue:
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 - The member is located in Tower Trial assembly area, Heavy Dock Jetty.
 - The indication was discovered in an area which had been previously tested and accepted by ZPMC QC UT technicians.
 - The NDT Inspection notification Number is 06711.

Action Required and/or Action Taken:

Propose a resolution for this non-conformance and provide documentation that the deficiency has been brought into compliance with the contract requirements. Propose a resolution that addresses the apparent failure of Quality Control to identify the indication. Additionally, provide documentation of the steps taken by the Quality Control Manager to prevent future occurrences.

The response for the resolution of this issue is requested within 7 days.

Transmitted by: Sean Eagen Transportation Engineer
Attachments: ZPMC-0805

NCT

(Continued Page 2 of 2)

cc: Rick Morrow, Peter Siegenthaler, Brian Boal, Mark Woods, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Siegenthaler, Peter
Resident Engineer

Ref: 05.03.06-000800

Subject: NCR No. ZPMC-0805

Dated: 27-Sep-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000797 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: To resolve this disagreement, ZPMC is providing the repair document and NDT to show that the indication found by the Department has been repaired, tested and is now acceptable.

ZPMC disputes the circumstances which this NCR was issued. ZPMC tested a different weld than the weld tested by the Department's inspector at the time and therefore the indication was not missed. To resolve this disagreement, ZPMC is providing the repair document and NDT to show that the indication found by the Department has been repaired, tested and is now acceptable. Based on this ZPCM requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000797R00;

Caltrans' comments:

Status: CLO

Date: 28-Sep-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0805 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 28-Sep-2010



No. T-170

LETTER OF RESPONSE

TO: American Bridge/Flour JV
DATE: 2010-09-25
REGARDING: NCR-000843 (ZPMC-805)

ZPMC received NCR-000843 (ZPMC-805), it mentioned that CT inspectors found indication on weld NSD1-FASA3-1C/E-12.

Once got advanced Incident Report for this situation, ZPMC made investigation on it. Here we are clarifying as below:

The fact was ZPMC/ABF's NDT inspector checked another weld NSD1-FASA3-1C/E-13, and signed on near the weld showing this weld was accepted. But CT inspector didn't notice the signature and did weld NSD1-FASA3-1C/E-12. So obviously, it's the over range checking. We agree if indication found by CT but above ZPMC's scanning range, ZPMC will conduct repairing work, but NCR is unreasonable.

As a conscientious attitude, ZPMC still took positive repair work, finally this weld was checked by CT and green tagged.

Here attached related report to show the weld is sound finally, basing on above information, ZPMC hope CT could take a review and close the NCR.

ATTACHMENT:

NCR-000843 (ZPMC-805)

T-WR3646

T787-UT-3245 R1

Zheng Li
2010.9.25



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: 21-Sep-2010

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: 05.03.06-000800

Subject: NCR No. ZPMC-0805

Reference Description: North Tower Lift 3: Missed UT Indication at 89m

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.
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Material Location: Tower

Lift: 03

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Attachments: ZPMC-0805

NCT

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cc: Rick Morrow, Peter Siegenthaler, Brian Boal, Mark Woods, Contract Files, Ching Chao, Bill Casey

File: 05.03.06

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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-000843**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 19-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0805**Type of problem:**Welding Concrete Other Welding Curing Procedural Joint fit-up Coating Other Procedural Procedural Description:**Bridge No:** 34-0006**Component:** Doubler Plate to Backfill Plate**Reference Description:** North Tower Lift 3: Missed UT Indication at 89m**Description of Non-Conformance:**

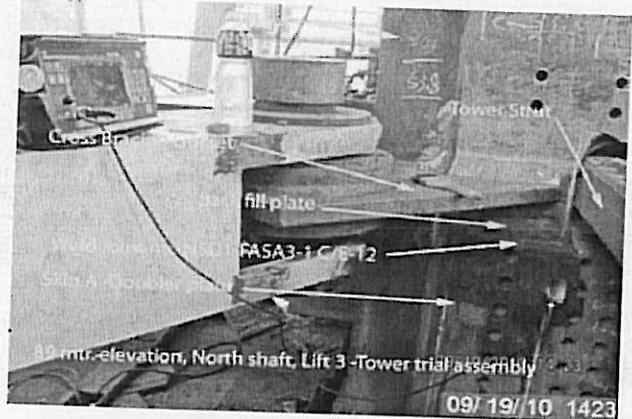
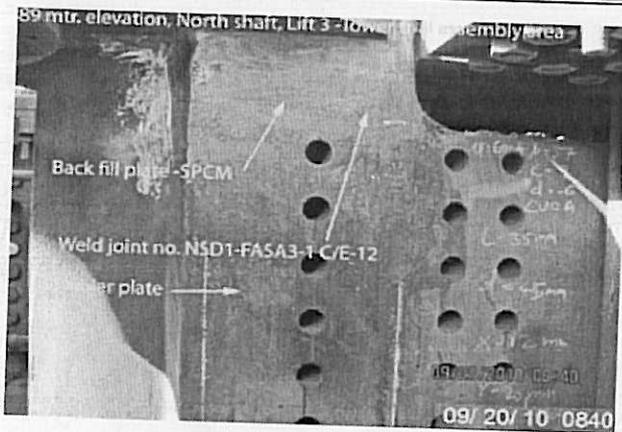
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For further information, please see the attached pictures below.

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Name of individual from Contractor notified: Bi De wei

Time and method of notification: 1435Hrs, 09/19/10, Verbal

Name of Caltrans Engineer notified: Sean Eagen

Time and method of notification: 1300Hrs, 09/20/10, Verbal

QC Inspector's Name: Mr. Zhao Chen Sun

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Ng, Michael

QA Inspector

Reviewed By: Devey, Jim

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	NSD1-FASA3-1C/E	报告编号 Report No.	T-WR3646
合同号 Contract No.	04-0120F4	部件名称 Items Name	TOWER (N)89M	NDT报告编号 Report No. of NDT	T787-UT-3245
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述：(普通UT探伤发现的缺陷长度小于最大允许长度)
(Description of welding discontinuity)

焊缝编号为：NSD1-FASA3-1C/E-12

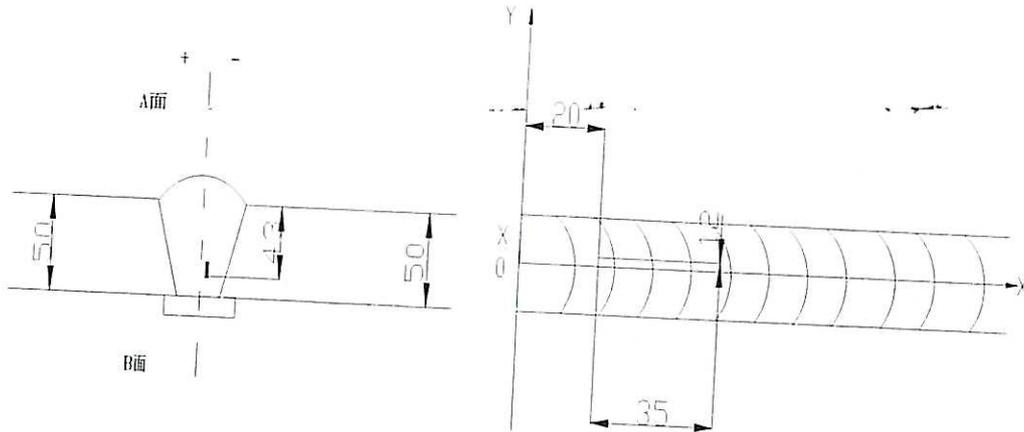
检验员 (Inspector) :

WU XIN SHENG
WU XINSHENG

日期(Date) : 2010.09.21

焊缝返修位置示意图：

Draft of welding discontinuity:



WELD NUMBER: NSD1-FASA3-1C/E-12

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):

日期(Date):

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. 将修补区域打磨到与母材或邻近焊缝平齐;
4. 根据批准的车间图纸检查焊缝.

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. Grind the repaired area flush with base metal or the adjacent weld;
4. Check the welds according to the working drawings.

工艺:
Technical engineer

审核:
Approved by

日期
Date

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

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(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-000791**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Sep-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0805**Type of problem:**

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

Date the Non-Conformance Report was written: 19-Sep-2010**Description of Non-Conformance:**

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- The NDT Inspection notification Number is 06711.

For further information, please see the attached pictures below.

Contractor's proposal to correct the problem:

Contractor disputes the NCR expressing the Department's inspectors tested a different weld than the one originally tested by their inspectors. However, they will repair the defective weld and submit NDT documentation test results.

Corrective action taken:

Contractor repaired the weld, and provided NDT documentation to confirm the repaired weld is acceptable.

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:

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Inspected By: Ng,Michael

Quality Assurance Inspector

Reviewed By: Devey,Jim

QA Reviewer