

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



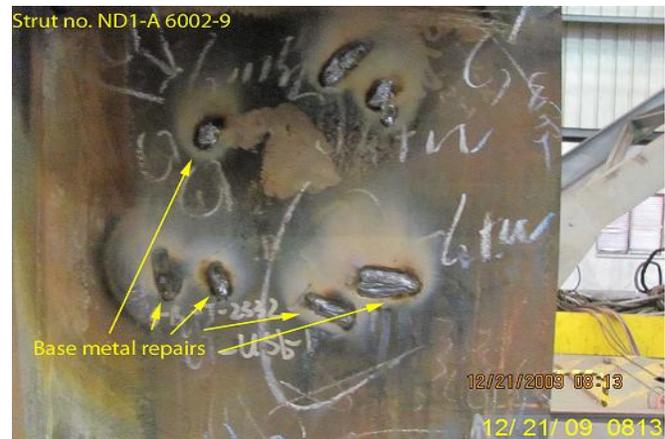
Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000517**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Dec-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0490**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Tower Spare Strut
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Tower Spare Strut ND1-A6002-9	

**Reference Description:** Base metal repair without Engineer approval on Tower Spare Strut ND1-A6002-9**Description of Non-Conformance:**

During in-process Visual Testing (VT), QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval. The base metal repairs were performed with Shielded Metal Arc Welding (SMAW) at eight (8) locations from 10 to 40 mm in length.



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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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### Applicable reference:

Standard Specifications (99) section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

ZPMC Welding Quality Control Plan, Section 9.2.1.2: "Prior approval of the Engineer shall be obtained for repairs to base metal other than what was identified in Section 9.2.1.1 of this manual and the repair of all other cracks."

AWS D1.5-2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal."

**Who discovered the problem:** Baskar Govindarajan

**Name of individual from Contractor notified:** Zhang Hui Long

**Time and method of notification:** 12/21/2009, 8:30; Verbal

**Name of Caltrans Engineer notified:** Ken Lee

**Time and method of notification:** 12/23/2009, 9:30; Verbal

**QC Inspector's Name:** Zhu Feng

**Was QC Inspector aware of the problem:** Yes No

**Contractor's proposal to correct the problem:**

### Comments:

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 139-1686-1597, who represents the Office of Structural Materials for your project.

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**Inspected By:** Sinevod,Serge

ASMR

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**Reviewed By:** Wahbeh,Mazen

SMR



**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**  
 333 Burma Road  
 Oakland CA 94607  
 Tel: 510-808-4618 Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

**To:** AMERICAN BRIDGE/FLUOR, A JV  
 375 BURMA ROAD  
 OAKLAND CA 95607

**Date:** 23-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:** 05.03.06-000480

**Subject:** NCR No. ZPMC-0490

**Reference Description:** Unapproved base metal repair/ Tower/ Spare Strut ND1-A6002-9

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:** N/A

**Remarks:**

During in-process Visual Testing (VT), QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval. The base metal repairs were performed with Shielded Metal Arc Welding (SMAW) at eight (8) locations from 10 to 40 mm in length.

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AWS D1.5-2002, Section 3.7.4: "Prior approval of the Engineer shall be obtained for repairs to base metal."

**Action Required and/or Action Taken:**

Propose a resolution for the identified non-conformance, documenting that the repaired weld is in compliance with the contract requirements. Documentation provided for the Engineer's review of the acceptability of the weld repair shall at a minimum include the procedure utilized/WRR and the NDT results.

In addition to the material/workmanship non-conformance, address the failure by both Production and Quality Control in proceeding with base metal repair without prior approval from the Engineer. Provide documentation of the steps/actions taken by Production and Quality Control to prevent future occurrences.

**Transmitted by:** Ken Lee Transportation Engineer

**Attachments:** ZPMC-0490

**cc:** Rick Morrow, Gary Pursell, Mark Woods, Scott Kennedy

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# NCT

( Continued Page 2 of 2 )

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**File:** 05.03.06

**NCR PROPOSED RESOLUTION**

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607  
**Attention:** Pursell, Gary  
Resident Engineer  
**Ref:** 05.03.06-000480  
**Subject:** NCR No. ZPMC-0490

**Dated:** 21-Jan-2010  
**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9  
**Job Name:** SAS Superstructure  
**Document No.:** ABF-NPR-000530 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC is submitting NDT documentation showing that the base metal repair is acceptable. In addition, the WRR used for the repair is being submitted as required.

ZPMC is submitting NDT documentation showing that the base metal repair is acceptable. In addition, the WRR used for the repair is being submitted as required. ZPMC has a pre approved base metal repair procedure in place, TAA-100. When these repairs take place ZPMC will notify the Department so they can witness the repair. Engineer approval of the repair will be required when the material is SPCM. Based on the documentation and steps to prevent this from occurring in the future, ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua  
**Attachment(s):** ABF-NPR-000530R00;

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**Caltrans' comments:**

**Status:** CLO  
**Date:** 21-Jan-2010

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0490 is closed.

**Submitted by:** Lee, Ken  
**Attachment(s):**

**Date:** 21-Jan-2010



No. T-117

## LETTER OF RESPONSE

**TO: American Bridge/Flour JV**

**DATE: 2010-1-20**

**REGARDING: NCR-000517(ZPMC-0490)**

ZPMC received NCR-000517(ZPMC-0490), it mentioned that QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval during in-process Visual Testing.

We confirmed it and took following action:

-MT and UT have been taken and the result shows that these positions are acceptable.

-This strut had been green tagged.

-Paper work has been issued to enhance that repairing of SPCM need CWR.

Here attach UT, MT and WR report to convince the quality of this Strut is acceptable.

Hope you can take a review and close this NCR.

**ATTACHMENT:**

**NCR-000517(ZPMC-0490)**

**T-787-MT-7882**

**T-787-UT-2621**

**T-WR3025**

*Zhao Jianeng*  
2010-1-20



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge  
 333 Burma Road  
 Oakland CA 94607  
 Tel: 510-808-4618 Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

To: AMERICAN BRIDGE/FLUOR, A JV  
 375 BURMA ROAD  
 OAKLAND CA 95607

Date: 23-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-0490

Job Name: SAS Superstructure  
 Document No: 05.03.06-000480

Reference Description: Unapproved base metal repair/ Tower/ Spare Strut ND1-A6002-9

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: N/A

**Remarks:**

During in-process Visual Testing (VT), QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval. The base metal repairs were performed with Shielded Metal Arc Welding (SMAW) at eight locations from 10 to 40 mm in length.

Standard Specifications (99) section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

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**Action Required and/or Action Taken**

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Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0490

cc: Rick Morrow, Gary Pursell, Mark Woods, Scott Kennedy

Received  
 NCT-000480 28 Dec 09

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NCT

( Continued Page 2 of 2 )

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File: 05.03.06

Zeon PDF Driver Trial  
www.zeon.com.tw

DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
Office of Structural Materials  
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Bay Area Branch  
690 Walnut Ave. St. 150  
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(707) 649-5453  
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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-000517

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 21-Dec-2009

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

NCR #: ZPMC-0490

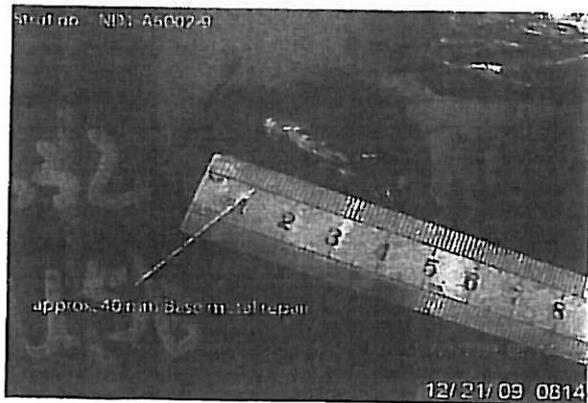
**Type of problem:**

- Welding  Concrete  Other
- Welding  Curing  Procedural  Bridge No: 34-0006
- Joint fit-up  Coating  Other  Component: Tower Spare Strut
- Procedural  Procedural  Description: Tower Spare Strut ND1-A6002-9

Reference Description: Base metal repair without Engineer approval on Tower Spare Strut ND1-A6002-9

**Description of Non-Conformance:**

During in-process Visual Testing (VT), QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval. The base metal repairs were performed with Shielded Metal Arc Welding (SMAW) at eight (8) locations from 10 to 40 mm in length.



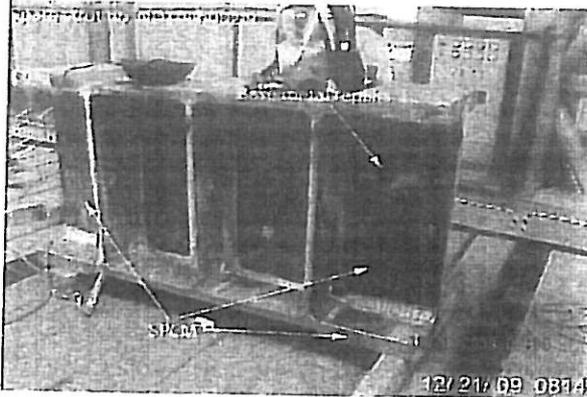
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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 2 of 2 )

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**Applicable reference:**

Standard Specifications (99) section 8-3.01: "The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered and also of the proposed repair procedures to correct them. For requests to perform repairs, The contractor shall include an engineering evaluation of the proposed repair."

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**Who discovered the problem:** Baskar Govindarajan

**Name of individual from Contractor notified:** Zhang Hui Long

**Time and method of notification:** 12/21/2009, 8:30; Verbal

**Name of Caltrans Engineer notified:** Ken Lee

**Time and method of notification:** 12/23/2009, 9:30; Verbal

**QC Inspector's Name:** Zhu Feng

**Was QC Inspector aware of the problem:**  Yes  No

**Contractor's proposal to correct the problem:**

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 139-1686-1597, who represents the Office of Structural Materials for your project.

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**Inspected By:** Sinevod,Serge

ASMR

**Reviewed By:** Wahbeh,Mazen

SMR

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# 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	ND1-A6002-9	报告编号 Report No.	T-WR3025
合同号 Contract No.:	04-0120F4	部件名称 Items Name	备用连系梁 Strut plate	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:**

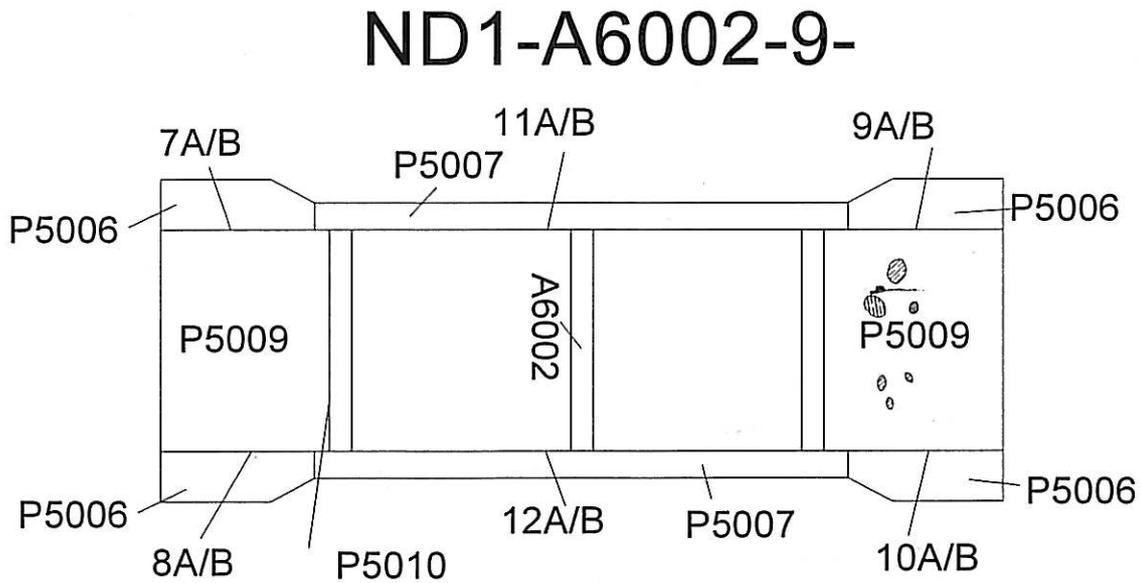
备用连系梁: ND1-A6002-9-. (P5009) 母材被割伤, 修补打磨后最大深度达5MM.

The base metal was gouged after grinding, maximum 5mm in depth, part No.: ND1-A6002-9-. (P5009)

检验员 (Inspector): Sun tianliang 日期(Date): 2009.12.20

焊缝返修位置示意图:

Draft of welding discontinuity:



注: (阴影部分为割伤区域)

Remark: repair area in shadow.

产生原因:

**Caused:**

工人操作失误, 导致母材损伤。

Worker operated error caused base metal gouged.

车间负责人(Foreman): *Wifei* 日期(Date): 12.20

处理意见

**Disposition :**

1. QC 须监控碳刨、打磨和焊接过程
2. 碳刨去除缺陷并打磨光滑
3. VT 检测以确保缺陷被清除
4. 焊接须符合 WPS 要求
5. 在进入下道焊缝前, QC 须确保所有焊渣都已被去除干净
6. 打磨返修区域使其与临近焊缝或母材齐平
7. 对返修区域进行 VT, MT 和 UT 检测

1. QC shall monitor gouging/grinding/welding
2. Gouge defects & grind smoothly
3. Verify that defects have been removed with VT
4. Welding shall be in accordance with WPS
5. QC shall ensure all slag is removed prior to deposition of subsequent weld passes
6. Blend repair area with adjacent base metal
7. Perform VT, MT, & UT to repaired area

工艺: *Lilium ping*  
Technical engineer

审核:  
Approved by

日期  
Date

12.20



# 焊缝返修报告

## Welding Repair Report

版本 Rev. No.

0

纠正措施:  
**Correction action to prevent re occurrence:**  
 培训和教育操作工, 提高操作水平。  
**Train and educate operation to improve operation skill.**

 车间负责人(Foreman): *Wu Ye fu* 日期(Date): *12.20*

**返修后检查**  
**Inspection After repairing:**

外观检查 VT result	检验员 Inspector	日期 Date	
NDT复检 NDT result	探伤员 NDT person	日期 Date	

见证:  
Witness/Review:

备注:  
Remark:

**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-000483**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 21-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0490**Type of problem:**

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

**Date the Non-Conformance Report was written:** 21-Dec-2009**Description of Non-Conformance:**

During in-process Visual Testing (VT), QA observed base metal repairs on spare strut ND1-A6002-9 without Engineer approval. The base metal repairs were performed with Shielded Metal Arc Welding (SMAW) at eight (8) locations from 10 to 40 mm in length.

**Contractor's proposal to correct the problem:**

Provide documentation that shows repair is acceptable.

**Corrective action taken:**

Repair/NDT documentation was provided (T-WR3025, T787-MT-7882, T787-UT-2621) and shows that the repairs are acceptable.

**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 Skyler Guest, 15000422360, who represents the Office of Structural Materials for your project.

<b>Inspected By:</b>	Ng, Michael	Quality Assurance Inspector
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<b>Reviewed By:</b>	Wahbeh, Mazen	QA Reviewer
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