

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
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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, PRC**Report No:** NCR-000189**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 04-Sep-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0170**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: SP-080 and BP-022
Procedural	Procedural	Description:	OBG Side and Bottom Panels

Reference Description: Unapproved thermal cutting of SP-080 and BP-022**Description of Non-Conformance:**

The Contractor performed freehand thermal cutting that had not been approved by the Engineer. This was observed at the junction of Side Plate SP-080 and Bottom Plate BP-022 at Panel Point PP028 of OBG Segment SEG 4BE.

**Applicable reference:**

AWS D1.5, Sec. 3.2.2: "Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: QA Inspector Steve Hall**Name of individual from Contractor notified:** ABFJV QC Inspector Mr. Steve Lawton**Time and method of notification:** 09/04/08 / 21:00 / Phone**Name of Caltrans Engineer notified:** Ching Chao**Time and method of notification:** Verbal notification at 12:00 on 09-08-2008**QC Inspector's Name:** ZPMC QC Inspector Mr. Testino Wang**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 Abifhram Velasco, who represents the Office of Structural Materials for your project.

Inspected By:	Velasco,Abifhram	SMR
Reviewed By:	Velasco,Abifhram	SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
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NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 16-Sep-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000161

Subject: NCR No. ZPMC-0170

Reference Description: Unapproved thermal cutting of SP-080 and BP-022

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:** 04

Remarks:

The Contractor performed freehand thermal cutting that had not been approved by the Engineer. This was observed at the junction of Side Plate SP-080 and Bottom Plate BP-022 at Panel Point PP028 of OBG Segment SEG 4BE.
Please refer to the attached NCR #ZPMC-0170 for details.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

Transmitted by: Ching Chao

Attachments: ZPMC-0170

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Doug Coe, 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: 05.03.06-000161

Subject: NCR No. ZPMC-0170

Dated: 28-Oct-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000172 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has submitted a procedure for free hand cutting approximately 2 weeks ago to CT for approval.

ZPMC performed free hand cutting on as it was not practical to set up mechanical devices to cut these pieces. ABF reminded ZPMC that free hand cutting is not unacceptable, however, free hand cutting must be approved by the Engineer. ZPMC has submitted a procedure for free hand cutting approximately 2 weeks ago to CT for approval.

Submitted by:

Attachment(s): ABF-NPR-000172R00

Caltrans' comments:

Status: REJ

Date: 09-Nov-2008

The proposed resolution is not acceptable. Submittal ABF-SUB-0872 requesting the use of free hand thermal cutting has been returned for correction.

Please re-submit the proposed NCR resolution when the submittal requesting the use of free hand thermal cutting has been resolved, or receive Engineer approval prior to the future use of free hand thermal cutting. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0170 at that time.

Submitted by: Wright, Doug

Date: 10-Nov-2008

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000161

Subject: NCR No. ZPMC-0170

Dated: 17-Dec-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000172 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will notify the onsite engineers representative prior to performing free-hand cutting.

ZPMC will notify the onsite engineers representative prior to performing free-hand cutting. Freehand cutting will be performed in accordance with the attached procedure. The attached procedure is submitted for information only.

Submitted by:

Attachment(s): Freehand Flame Cutting; ABF-NPR-000172R01

Caltrans' comments:

Status: REJ

Date: 22-Dec-2008

The proposed resolution is not acceptable. Freehand thermal cutting shall only be done where the Engineer has given prior approval in writing.

The freehand flame cutting procedure attached to this NPR was submitted in ABF-SUB-000872, and returned for correction as detailed in State letter 5.03.01-2934. Revisions to fabrication procedures should be addressed through a formal submittal, and not through a proposed resolution to an NCR.

Submitted by: Wright, Doug

Date: 23-Dec-2008

Attachment(s):

Freehand Flame Cutting.

Freehand flame cutting procedure:

Freehand flame cutting procedure may be performed in areas where it is impractical to use machine flame cutting or a mechanical guide. Freehand flame cutting should follow this procedure unless otherwise approved by Engineer.

1. Mark the cutting line on steel plate.
2. Carefully freehand flame cut to approximately 3mm above the cutting line.
3. Grind the remaining 3mm to the cutting line.
4. Occasional notches or gouges deeper than the cutting line, which are not subsequently welded, should be removed by fairing to the material edge with a slope not steep than 1:10 and with grinding marks parallel to the material surfaces. The repair should not remove more than 2% of the nominal section.
5. Maximum roughness for the flame cut surface should meet the requirements in AWS D1.5.
6. Sharp corners that are not to be incorporated into a weld shall be removed by chamfering the edge.

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000161

Subject: NCR No. ZPMC-0170

Dated: 02-Feb-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000172 Rev: 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm.

ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm. Materials less than or equal to 25mm will be performed on a pre-approved basis in accordance with the attached procedure. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ; ABF-NPR-000172R02

Caltrans' comments:

Status: CLO

Date: 17-Feb-2009

The proposed resolution is acceptable. The freehand flame cutting procedure was submitted as part of ABF submittal 872R01, and was approved as noted in State letter 3475. The Department concurs that Non-Conformance ZPMC-0170 is closed.

Flame cutting of materials greater than 25mm in thickness requires Engineer approval prior to cutting.

Submitted by: Wright, Doug

Date: 17-Feb-2009

Attachment(s):

Subject: Free Hand Flame Cutting Procedure

1.0 **Purpose**

- 1.1 The purpose of this procedure is to request Engineer's approval for flame cutting when mechanically guided flame cutting is not practical due to accessibility, cross sectional geometry and or position.

2.0 **Scope**

- 2.1 This procedure outlines the technique and process for flame cutting of materials 25mm and less when mechanical guides are not available.
- 2.2 Flame cutting of materials greater than 25mm shall require notification of the Engineer prior to cutting.

3.0 **Procedure**

- 3.1 Mark a cutting line on the item to be cut.
- 3.2 Protect surrounding materials with cover plates or suitable nonflammable material. Or remove surrounding material that may be damaged.
- 3.3 Carefully cut to approximately 3mm above the cutting line. If possible, the use of a cutting guide such as a piece of angle iron, flat bar or other template shall be used to guide the torch tip in a straight line while cutting.
- 3.4 Grind the remaining 3mm to the cutting line. Ground edges shall be inspected for discontinuities per AWS D1.5 Section 3.2.3. All repairs shall be per AWS D1.5 Section 3.2.3.
- 3.5 Occasional notches of gouges deeper than the cutting line in the material edges, which are not subsequently welded, should be removed by fairing to the material edge with a slope not steeper than 1 : 10 and with grinding marks parallel to the material surfaces. The repair should not remove more than 2% of the nominal section.
- 3.6 Maximum roughness for the flame cut surface should meet the requirements in AWS D1.5 Section 3.2.3.
- 3.7 Sharp corners that are not to be incorporated into a weld shall be removed by chamfering the edge.

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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-000200**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 27-Feb-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0170**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: 04-Sep-2008**Description of Non-Conformance:**

The Contractor performed freehand thermal cutting that had not been approved by the Engineer. This was observed at the junction of Side Plate SP-080 and Bottom Plate BP-022 at Panel Point PP028 of OBG Segment SEG 4BE.

Contractor's proposal to correct the problem:

ZPMC will notify the onsite engineers prior to freehand flame cutting materials over 25mm. ZPMC will work according to the approved as noted submittal ABF-SUB-000872R01 "Freehand Flame Cutting Shop Procedure - ZPMC Fabrication Procedure," dated January 27, 2009.

Corrective action taken:

The proposed resolution is acceptable. The freehand flame cutting procedure was submitted as part of the ABF submittal 872R01, and was approved as noted in State letter 3475. ZPMC will work according to this approved as noted submittal. Also, ZPMC/ABF will notify CT and obtain Engineer's approval prior to flame cutting of materials greater than 25mm thick.

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 Eric Tsang, +(86) 150.0042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer