

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-000438**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 28-Sep-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0412**Type of problem:****Welding****Concrete****Other****Welding****Curing****Procedural****Bridge No:** 34-0006**Joint fit-up****Coating****Other****Component:** North Tower**Procedural****Procedural****Description:** North Tower, Lift 3, BC Diagonal Stiffener**Reference Description:** Free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener**Description of Non-Conformance:**

QA observed ZPMC personnel perform free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener, between the 85m and 89m Diaphragms. The length of the cut was approximately 850mm.

**Applicable reference:**

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Shrikant Utekar**Name of individual from Contractor notified:** Xiao Jun Peng**Time and method of notification:** 9/28/2009, 22:30; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 9/31/2009, 12:00; Verbal**QC Inspector's Name:** Guo Zhi Chun

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000398

Subject: NCR No. ZPMC-0412

Dated: 22-Oct-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000406 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC acknowledges that free hand thermal cutting is not permitting without prior Engineer approval and in the future ZPMC CVMs monitor thermal cutting activities closer.

The ABF JV QCM has discussed this issue with the ZPMC QA department, the ZPMC QA department in turn has discussed this ZPMC Production. ZPMC understands and acknowledges that free hand thermal cutting is not permitting without prior Engineer approval and in the future ZPMC CVMs monitor thermal cutting activities closer to ensure that it is in compliance. The surfaces in questions will be ground to shiny metal and the joint fit will be inspected by a CWI prior to welding.

Submitted by:

Attachment(s): ABF-NPR-000406R00

Caltrans' comments:

Status: AAP

Date: 27-Oct-2009

The proposal is acceptable. However, please address how the proper joint fit up will be maintained. This NCR (ZPMC-412) will not be closed until the referenced issue is satisfactorily addressed.

Submitted by: Lee, Ken

Attachment(s): NPR CT Comments

Date: 27-Oct-2009

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000398

Subject: NCR No. ZPMC-0412

Dated: 09-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000406 **Rev:** 01

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will ensure proper joint fit up by having a CWI verify the joint fit up. The proper joint fit up will be documented in the Daily Production Log. ZPMC requests closure of this NCR.

ZPMC will ensure proper joint fit up by having a CWI verify the joint fit up. The proper joint fit up will be documented in the Daily Production Log. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000406R01

Caltrans' comments:

Status: CLO

Date: 18-Nov-2009

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0412 is closed.

Submitted by: Lee, Ken

Date: 18-Nov-2009

Attachment(s):

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000398

Subject: NCR No. ZPMC-0412

Dated: 17-Nov-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000406 **Rev:** 02

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has resolved the discrepancy between their internal procedure and AWS D1.5 and understands that Engineer approval is required for free hand thermal cutting.

ZPMC has resolved the discrepancy between their internal procedure and AWS D1.5 and understands that Engineer approval is required for free hand thermal cutting. A CVI will monitor free hand thermal cutting in the future to prevent this non conformance. ZPMC has provided their internal free hand thermal procedure which was used in the documented NCR. Enclosed are photos of the final condition of the free hand cut. Based on this ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000406R02;

Caltrans' comments:

Status: CLO

Date: 18-Nov-2009

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0412 is closed.

Submitted by: Lee, Ken

Date: 18-Nov-2009

Attachment(s):



No. T-079

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-11-16

REGARDING: NCR-000463 (ZPMC-0436)
NCR-000469 (ZPMC-0442)
NCR-000438 (ZPMC-0412)
NCR-000417 (ZPMC-0391)

ZPMC received four NCRs, it mentioned that QA observed "free hand thermal cutting" being carried out by ZPMC personnel during in-process VT of West Tower and North Tower.

Actually, ZPMC conducted freehand flame cutting as the attached internal procedure. Since there is the discrepancy between the ZPMC internal procedure and the AWS D1.5 clause, now ZPMC understands and acknowledges that free hand thermal cutting is not permitting without prior Engineer approved and in the future. ZPMC QA and QC had discussed with the relative work team. The CWI will monitor thermal cutting activities closer to ensure that it is compliance. Also, ZPMC will try to use the automatic thermal cutting machine or prepare a mechanical guide before cutting.

So ZPMC provided the internal cutting procedure and the pictures of final condition of the joint freehand cut, hoping Caltrans could take a review and consider close these NCR. If it's necessary to use the freehand flame cutting, ZPMC will ask for Engineer's approval in the future.

ATTACHMENT:

NCR-000463 (ZPMC-0436)

NCR-000469 (ZPMC-0442)

NCR-000438 (ZPMC-0412)

NCR-000417 (ZPMC-0391)

Freehand Flame cutting procedure

4 Relative Pictures After Bevel Preparation

 2009-11-17



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: 03-Nov-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: 05.03.06-000422

Subject: NCR No. ZPMC-0436

Reference Description: Free hand thermal cutting without prior approval of the Engineer/ North Tower, Lift 1/ Exterior Bearing Stiffeners

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:** 01

Remarks:

During Visual Testing (VT) of North Tower, Lift 1, Skin E exterior bearing stiffeners, QA observed 'free hand thermal cutting' for bevel preparation being carried out by ZPMC personnel without approval by the Engineer.

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance, documenting that the affected plate edges have been brought in compliance with the contract requirements.

In addition, to the material/workmanship non-conformance, propose a resolution for this systematic non-conformance that addresses the failure of Quality Control to identify the deficiency. NPR ZPMC-391 and NPR ZPMC-412 addressed the same type of non-conformance, ABFJV stated in part, "ZPMC understands and acknowledges that free hand thermal cutting is not permitting without prior Engineer approval and in the future ZPMC CWIs monitor thermal cutting activities closer to ensure that it is in compliance". Please also address the apparent failure of the internal communication within ZPMC that caused this now systematic failure. In the event of another repeated incident of this type, address what steps/ actions will be taken by ABFJV.

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0436

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

File: 05.03.06

02.02.15.04
 05.03.06-000422.NCT

Received
 NCT-000422 03 Nov 09 Page 1 of 1

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

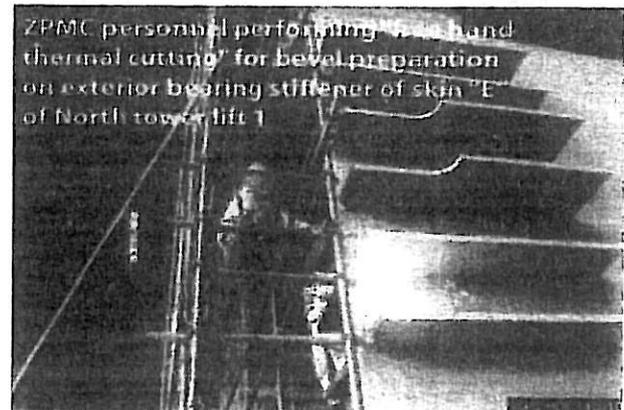
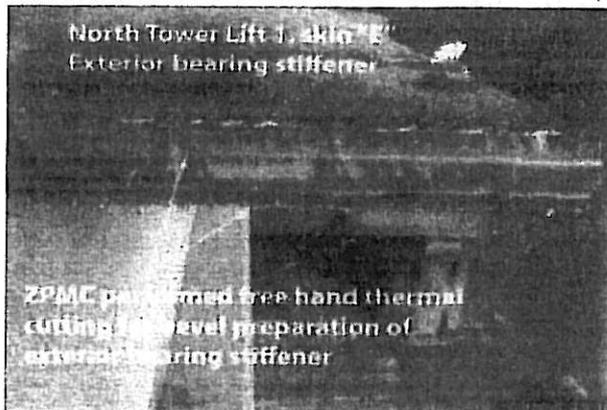
Quality Assurance and Source Inspection



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-000463**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 31-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0436**Type of problem:**Welding Concrete Other Welding Curing Procedural **Bridge No:** 34-0006Joint fit-up Coating Other **Component:** North TowerProcedural Procedural **Description:** North Tower, Lift 1**Reference Description:** Unapproved free hand thermal cutting of North Tower, Lift 1 Exterior Bearing Stiffeners**Description of Non-Conformance:**

During Visual Testing (VT) of North Tower, Lift 1, Skin E exterior bearing stiffeners, QA observed 'free hand thermal cutting' for bevel preparation being carried out by ZPMC personnel without approval by the Engineer.

**Applicable reference:**

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Umesh Gaikwad**Name of individual from Contractor notified:** Xing Xiao Guang**Time and method of notification:** 10/31/2009, 14:00; Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 11/2/2009, 8:00; Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod,Serge

ASMR

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: 06-Nov-2009

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

Dear: Mr. Charles Kanapicki
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0442

Document No: 05.03.06-000432

Reference Description: Unapproved freehand thermal cutting/ North Tower, Lift 1/Exterior bearing stiffeners

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: 01

Remarks:

During Visual Testing (VT) of North Tower, Lift 1, exterior bearing stiffeners, QA observed 'freehand thermal cutting' being carried out by ZPMC personnel without Engineer approval.

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance, documenting that the affected plate edges have been brought in compliance with the contract requirements.

In addition, to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to identify the deficiency.

Provide documentation of the steps/actions taken by the Quality Control Manager with regard to both Production and Quality Control to prevent future occurrences.

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0442

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

File: 05.03.06

02:15:04
 05.03.06-000432,NCT

Received
 NCT-000432 06 Nov 09 Page 1 of 1

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-000469

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 04-Nov-2009

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

NCR #: ZPMC-0442

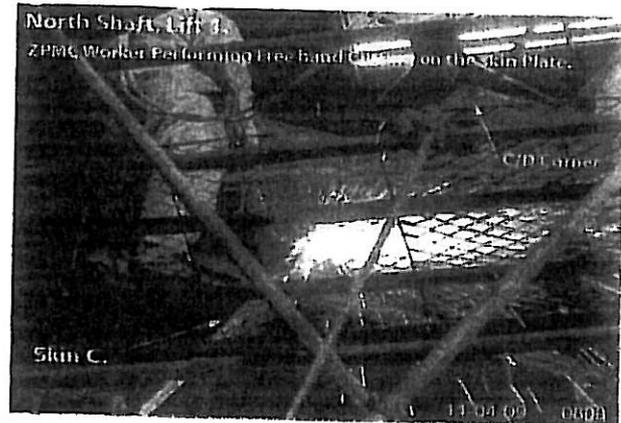
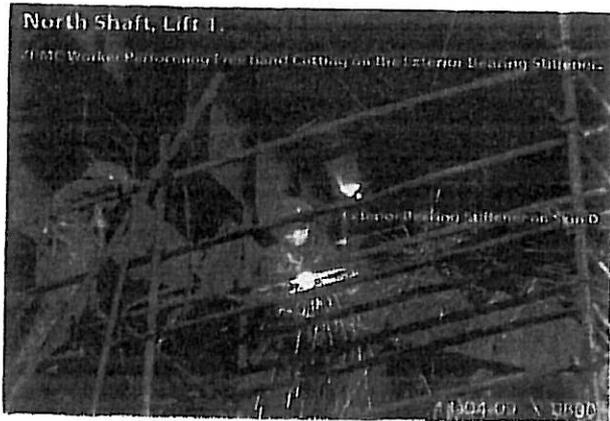
Type of problem:

- | | | | | | | |
|--------------|--------------------------|------------|--------------------------|--------------|-------------------------------------|-------------------------------|
| Welding | <input type="checkbox"/> | Concrete | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> | |
| Welding | <input type="checkbox"/> | Curing | <input type="checkbox"/> | Procedural | <input type="checkbox"/> | Bridge No: 34-0006 |
| Joint fit-up | <input type="checkbox"/> | Coating | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> | Component: North Tower |
| Procedural | <input type="checkbox"/> | Procedural | <input type="checkbox"/> | Description: | | North Tower, Lift 1 |

Reference Description: Unapproved freehand thermal cutting on North Tower, Lift 1

Description of Non-Conformance:

During Visual Testing (VT) of North Tower, Lift 1, exterior bearing stiffeners, QA observed 'freehand thermal cutting' being carried out by ZPMC personnel without Engineer approval.



Applicable reference:

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Amit Juvekar

Name of individual from Contractor notified: Mr. Kim

Time and method of notification: 11/4/2009, 8:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 11/5/2009, 13:00; Verbal

QC Inspector's Name: Zhu Feng

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

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, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By: Sinevod,Serge

ASMR

Reviewed By: Wahbeh,Mazen

SMR

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: 02-Oct-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-0412

Job Name: SAS Superstructure
Document No: 05.03.06-000398

Reference Description: Freehand Thermal Cutting Without Engineer Approval / North Shaft Lift 3 / BC Diagonal Stiffener

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:

QA observed ZPMC personnel perform free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener, between the 85m and 89m Diaphragms. The length of the cut was approximately 850mm.

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance, documenting that the affected plate edges have been brought in compliance with the contract requirements.

In addition, to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to identify the deficiency.

Provide documentation of the steps/actions taken by the Quality Control Manager with regard to both Production and Quality Control to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer
Attachments: ZPMC-0412

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe
File: 05.03.06

02.02.15.04

05.03.06-000398.NCT

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NCT - 05.03.06 02 Oct 09

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/ALARte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000438

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 28-Sep-2009

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

NCR #: ZPMC-0412

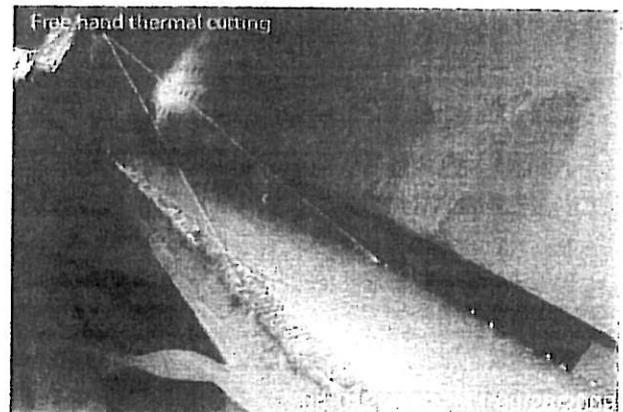
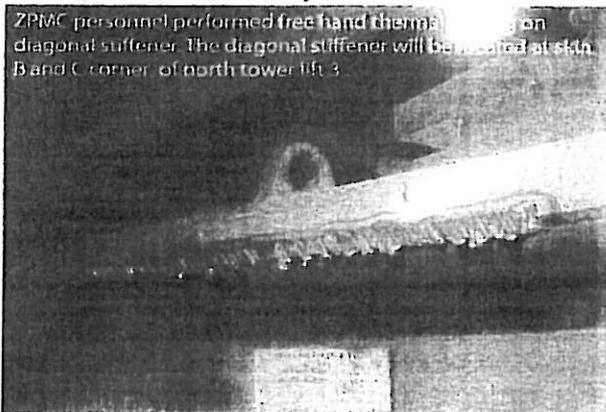
Type of problem:

Welding **Concrete** **Other**
Welding **Curing** **Procedural** **Bridge No:** 34-0006
Joint fit-up **Coating** **Other** **Component:** North Tower
Procedural **Procedural** **Description:** North Tower, Lift 3, BC Diagonal Stiffener

Reference Description: Free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener

Description of Non-Conformance:

QA observed ZPMC personnel perform free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener, between the 85m and 89m Diaphragms. The length of the cut was approximately 850mm.



Applicable reference:

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Shrikant Utekar

Name of individual from Contractor notified: Xiao Jun Peng

Time and method of notification: 9/28/2009, 22:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 9/31/2009, 12:00; Verbal

QC Inspector's Name: Guo Zhi Chun



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: 21-Sep-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-0391

Job Name: SAS Superstructure
Document No: 05.03.06-000379

Reference Description: Freehand Thermal Cutting Without Engineer Approval / West Shaft Lift 1 / Base Bevel Preparation

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:** 01

Remarks:

During in-process Visual Testing (VT) of West Tower, Lift 1, base-end bevel preparation, QA observed 'freehand thermal cutting' being carried out by ZPMC personnel. Access to the areas being cut were not restricted due to cross sectional geometry and or position in so far as mechanical guides could not be used.

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance, documenting that the affected plate edges have been brought in compliance with the contract requirements.

In addition, to the material/workmanship non-conformance, propose a resolution for the identified non-conformance that addresses the failure of Quality Control to indentify the deficiency.

Provide documentation of the steps/actions taken by the Quality Control Manager with regard to both Production and Quality Control to prevent future occurrences.

Transmitted by: Scott Kennedy Sr. Bridge Engineer

Attachments: ZPMC-0391

cc: Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

File: 05.03.06



DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection

Contract #: 04-0120F4

City: SF/ALARAte: 80 PM: 13.2/13.9

File #: 69.25B

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

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000417

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 21-Sep-2009

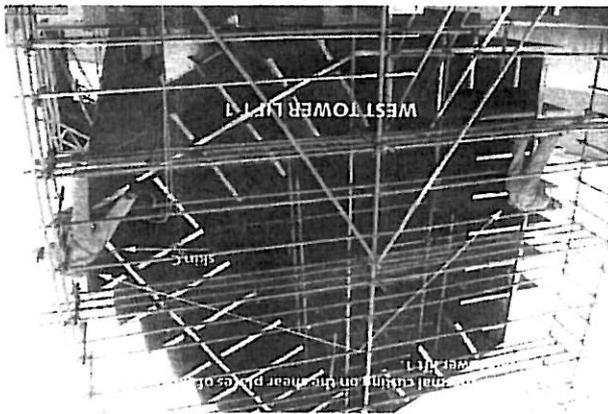
Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island NCR #: ZPMC-0391

Type of problem:

- | | | | | | |
|--------------|--------------------------|------------|--------------------------|--------------------|-------------------------------------|
| Welding | <input type="checkbox"/> | Concrete | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> |
| Welding | <input type="checkbox"/> | Curing | <input type="checkbox"/> | Procedural | <input type="checkbox"/> |
| Joint fit-up | <input type="checkbox"/> | Coating | <input type="checkbox"/> | Other | <input checked="" type="checkbox"/> |
| Procedural | <input type="checkbox"/> | Procedural | <input type="checkbox"/> | West Tower, Lift 1 | <input type="checkbox"/> |

Reference Description: Unapproved freehand thermal cutting on West Tower base-end bevel preparation

Description of Non-Conformance: During in-process Visual Testing (VT) of West Tower, Lift 1, base-end bevel preparation, QA observed 'freehand thermal cutting' being carried out by ZPMC personnel. Access to the areas being cut were not restricted due to cross sectional geometry and or position in so far as mechanical guides could not be used.



Applicable reference:

AWS D1.5-2002, Section 3.2.3 - "Steel and weld metal may be thermally cut, provided a smooth and regular surface free from cracks and notches is secured, and provided that an accurate profile is secured by the use of a mechanical guide. Freehand thermal cutting shall be done only where approved by the Engineer."

Who discovered the problem: Umesh Gaikwad

Name of individual from Contractor notified: Luo Lai Quan

Time and method of notification: 9/21/2009, 10:00; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 9/21/2009, 12:00; Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name: Zhao Mao Mao

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

Comments:
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Inspected By: Sinevod,Serge	ASMR
Reviewed By: Wahbeh,Mazen	SMR

上海振华港机(集团)股份有限公司 ZPMC
 SHANGHAI ZHENHUA PORT MACHINERY CO., LTD.

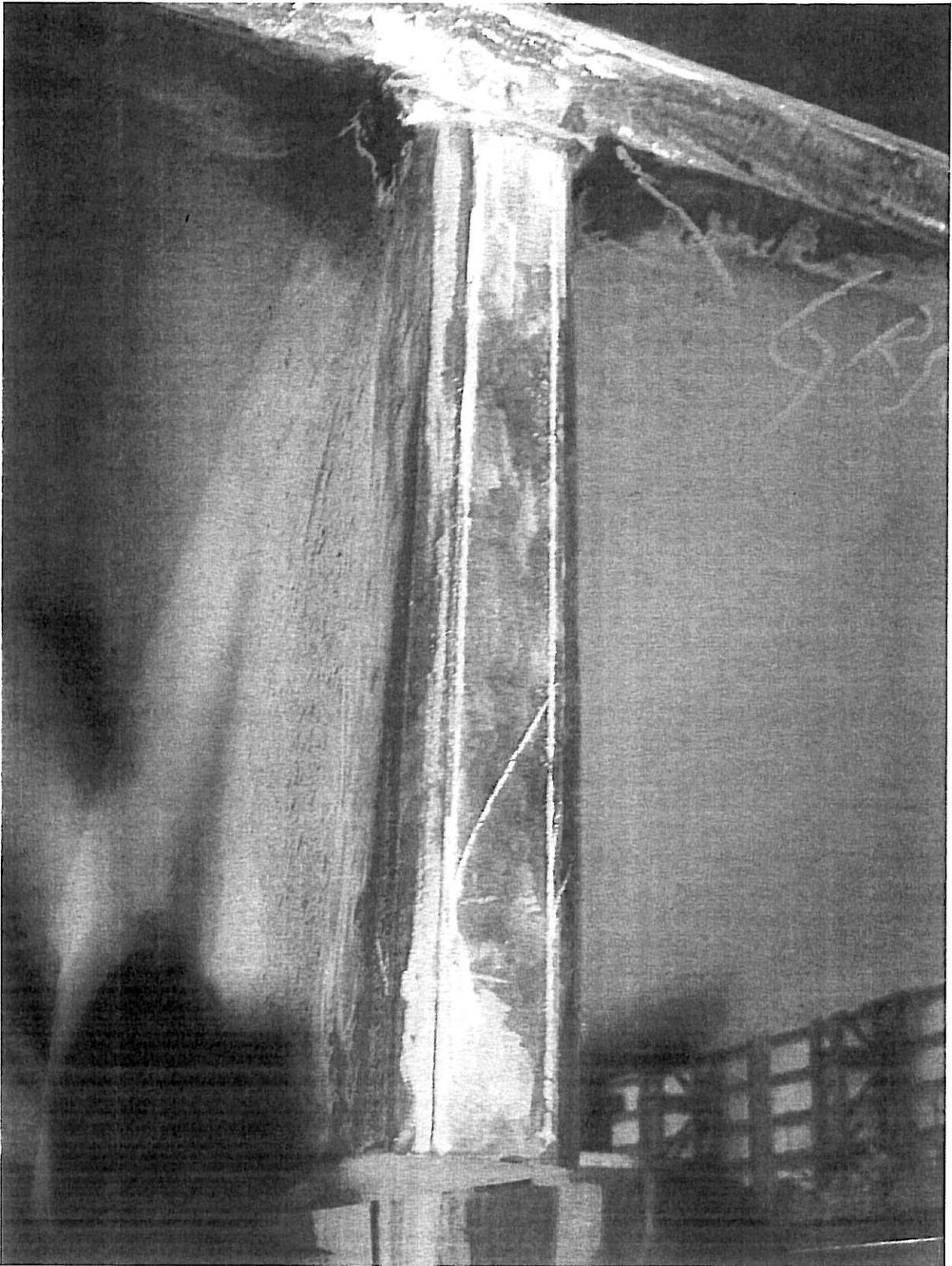
地址: 中华人民共和国上海浦东东陆路3470号 ADDRESS: 3470 FUDONG NANLU, SHANGHAI 200125, P.R.CHINA
 电话(传真): 201125 Telephone(电传): +86 21 58386666 Fax (电传): +86 21 58386666 Email(电子邮件): ma@zpmc.com

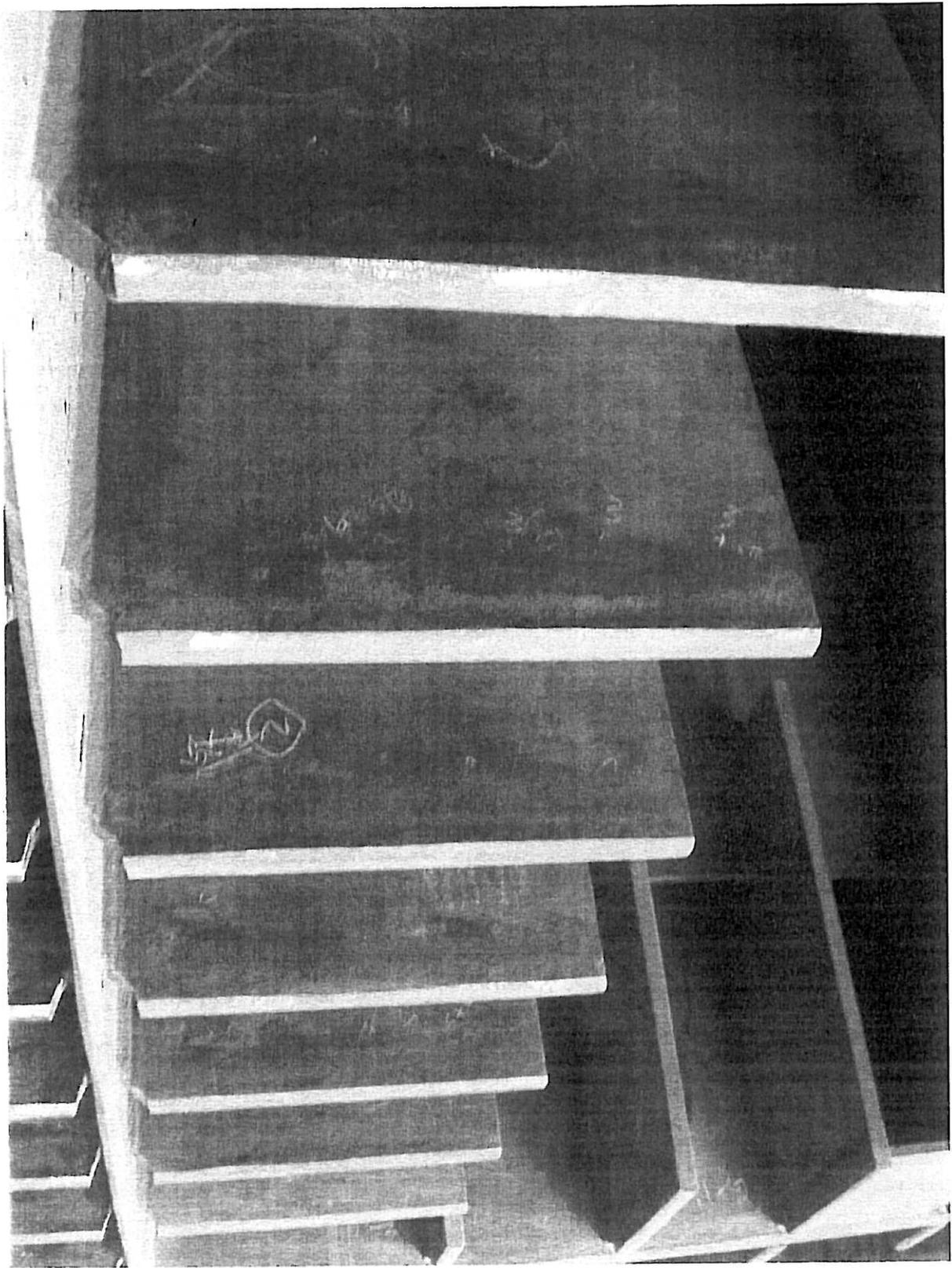
Freehand Flame Cutting.

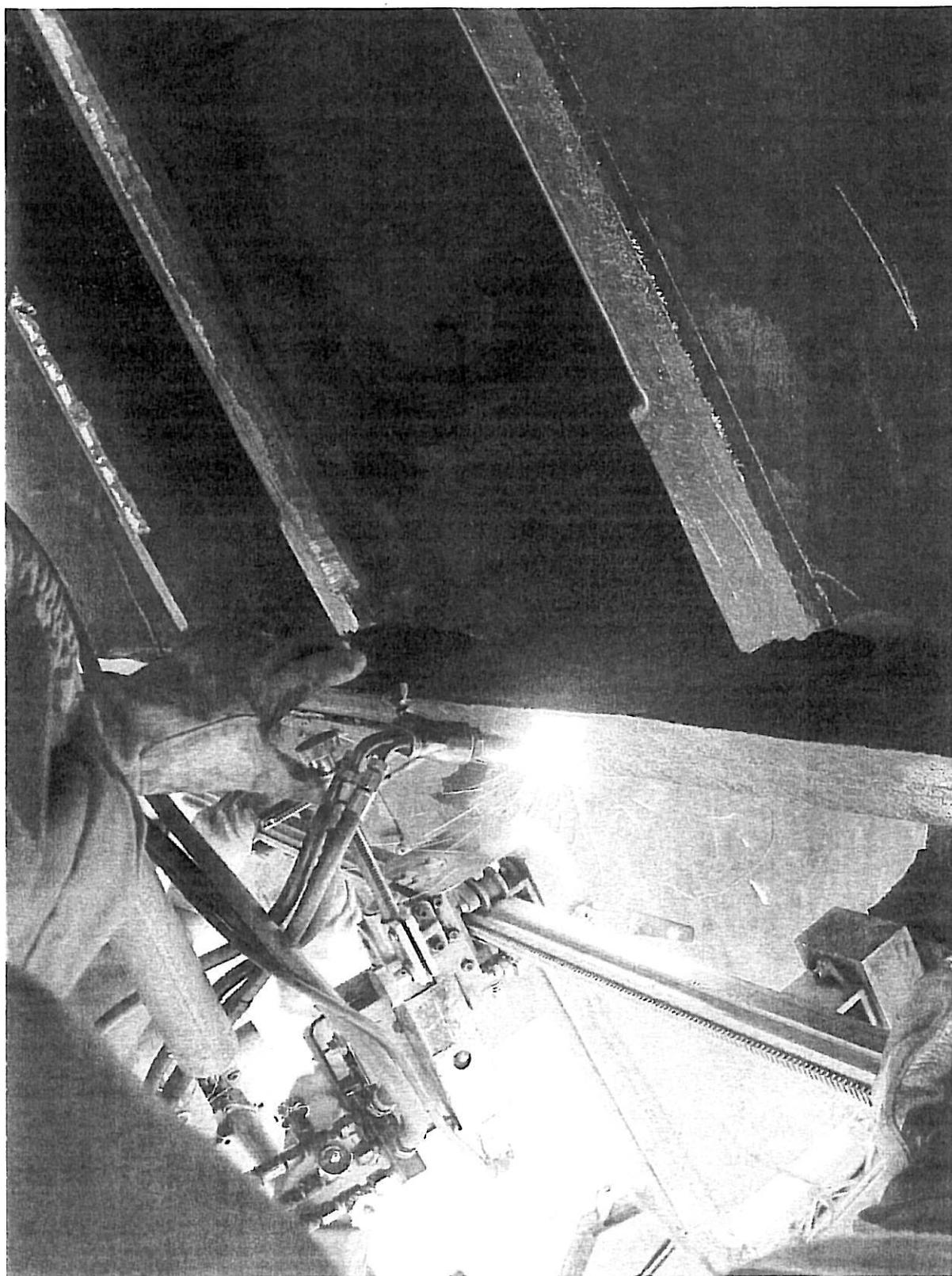
Freehand flame cutting procedure:

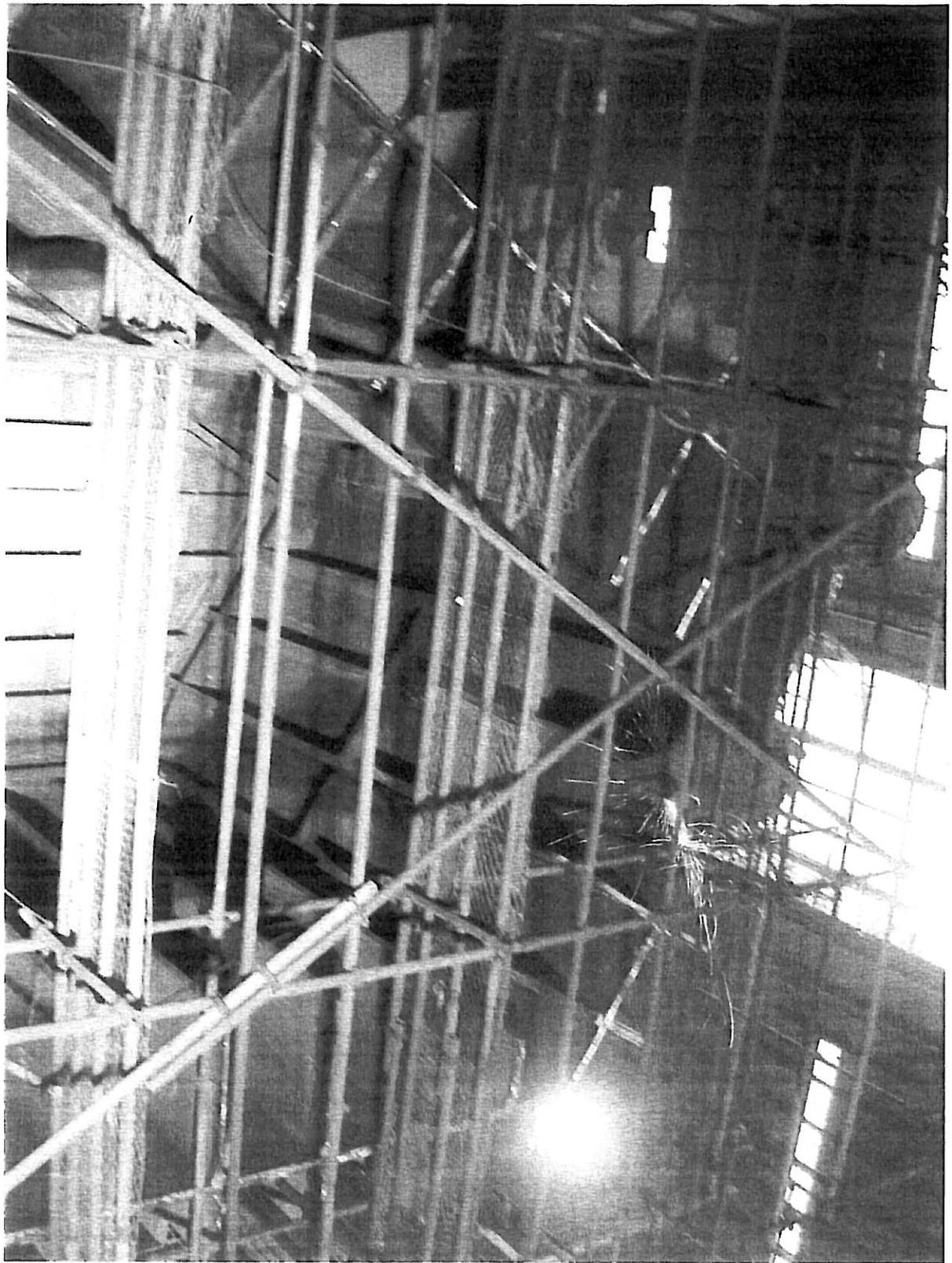
Freehand flame cutting procedure may be performed in areas where it is impractical to use machine flame cutting or a mechanical guide. Freehand flame cutting should follow this procedure unless otherwise approved by Engineer.

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.









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-000315**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Oct-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0412**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: 28-Sep-2009**Description of Non-Conformance:**

QA observed ZPMC personnel perform free hand thermal cutting on North Tower, Lift 3, BC Diagonal Stiffener, between the 85m and 89m Diaphragms. The length of the cut was approximately 850mm.

Contractor's proposal to correct the problem:

ZPMC acknowledges that free hand thermal cutting is not permitted without prior Engineer approval and in the future, ZPMC CWIs will closely monitor thermal cutting activities.

Corrective action taken:

The ABFJV QCM has discussed the issue with the ZPMC QA department and the ZPMC QA department, in turn, has discussed this with ZPMC production. The surfaces in question were ground smooth and the joint fit was inspected by a CWI prior to welding.

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:**

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Inspected By: Sinevod, Serge

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer