

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-000595

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 04-Jan-2010

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

NCR #: ZPMC-0568

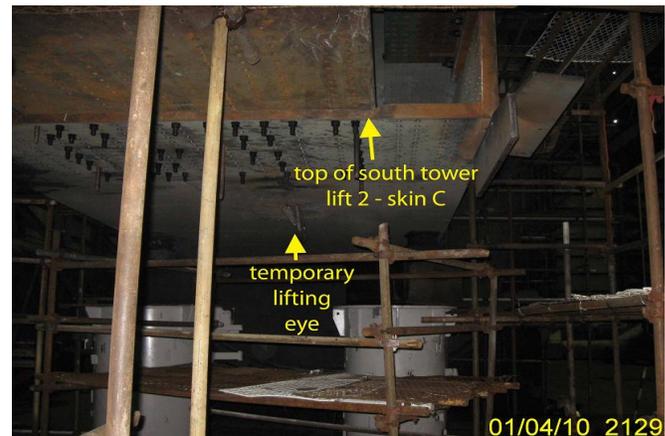
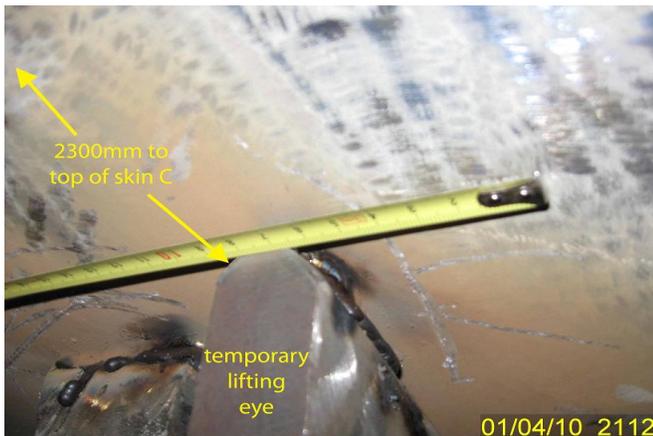
Type of problem:

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: South Tower
Procedural	Procedural	Description: South Tower, Lift 2	

Reference Description: Inadequate preheat on South Tower, Lift 2, Skin C Temporary Lifting Eye

Description of Non-Conformance:

During in-process Visual Testing (VT) of South Tower, Lift 2, Skin C, QA observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of partial joint penetration weld attaching a temporary lifting eye plate without sufficient base material preheat. A 110 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt.



Applicable reference:

Welding Procedure Specification WPS-B-T-2314-TC-P5, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 110° Celsius.

AWS D1.5-2002, Section 4.2.7 requires the base metal material to be at or above the specified minimum temperature for a distance not less than 75mm in all directions from the point of welding.

Who discovered the problem: George Goulet

Name of individual from Contractor notified: Yang Ye Heng

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 1/4/2010, 21:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 1/5/2010, 13:00; Verbal

QC Inspector's Name: Du Zhi Qun

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.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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: 05-Jan-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: 05.03.06-000558

Subject: NCR No. ZPMC-0568

Reference Description: Inadequate preheat/ South Tower, Lift 2, Skin C / Temporary Lifting Eye

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:** 02

Remarks:

During in-process Visual Testing (VT) of South Tower, Lift 2, Skin C, QA observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of partial joint penetration weld attaching a temporary lifting eye plate without sufficient base material preheat. A 110 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt.

Welding Procedure Specification WPS-B-T-2314-TC-P5, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 110° Celsius.

AWS D1.5-2002, Section 4.2.7 requires the base metal material to be at or above the specified minimum temperature for a distance not less than 75mm in all directions from the point of welding.

Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance including documentation that the welds placed are in compliance with the contract requirements. In addition to addressing Production’s failure to perform the required preheat of the material, address the failure of Quality Control to identify the inadequate preheat. Provide documentation of the steps/actions taken by Production and Quality Control to prevent future occurrences. Also detail what steps/actions are being taken by ABFJV to address the quality control failures of ABFJV’s fabricator/ZPMC.

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0568

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

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000558

Subject: NCR No. ZPMC-0568

Dated: 20-Jan-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000529 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: In the future ZPMC will have a welding repair report for repairs of temporary attachments so that the parameters of the weld are clear to the production and QC personnel.

ZPMC is providing NDT documentation of the temporary weld to show that it is acceptable. In this specific case, ZPMC has discussed the importance of applying the same preheating requirements to temporary attachments as permanent welds with the production foreman. The production foreman has acknowledged that the area should have been preheated prior to welding. ABFJV has discussed this with ZPMC and in the future ZPMC will have a welding repair report for repairs of temporary attachments so that the parameters of the weld are clear to the production and QC personnel. Based on these actions and the NDT documentation, ZPMC requests closure of the NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000529R00;

Caltrans' comments:

Status: CLO

Date: 20-Jan-2010

The proposed resolution is acceptable. The Department concurs that Non-conformance ZPMC-0568 is closed.

Submitted by: Lee, Ken

Date: 20-Jan-2010

Attachment(s):



No. T-121

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-1-19

REGARDING: NCR-000595(ZPMC-0568)

ZPMC received NCR-000595(ZPMC-0568), it mentioned that QA observed ZPMC personnel performing SMAW of PJP weld attaching a temporary lifting eye plate without sufficient base metal preheat.

ZPMC acknowledged this problem and inculcated the foreman to enhance the management and control of welding and it must be checked by QC before and during welding. Here attached the NDT report to show the temporary weld is sound, the result shows the preheating issue didn't influence the weld quality.

So ZPMC hope Caltrans could take a review and close this NCR.

ATTACHMENT:

NCR-000595(ZPMC-0568)

T-787-MT-7883

Zhang Jindai 2010.1.19



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 Date: 05-Jan-2010
 375 BURMA ROAD Contract No: 04-0120F4
 OAKLAND CA 95607 04-SF-80-13.2 / 13.9
 Dear: Mr. Charles Kanapicki Job Name: SAS Superstructure
 Attention: Mr. Thomas Nilsson Project/Fabrication Manager Document No: 05.03.06-000558
 Subject: NCR No. ZPMC-0568

Reference Description: Inadequate preheat/ South Tower, Lift 2, Skin C / Temporary Lifting Eye

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Material Location: Tower Lift: 02

Remarks:

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Action Required and/or Action Taken:

Propose a resolution for this systematic non-conformance including documentation that the welds placed are in compliance with the contract requirements. In addition to addressing Production's failure to perform the required preheat of the material, address the failure of Quality Control to identify the inadequate preheat. Provide documentation of the steps/actions taken by Production and Quality Control to prevent future occurrences. Also detail what steps/actions are being taken by ABFJV to address the quality control failures of ABFJV's fabricator/ZPMC.

Handwritten notes in Chinese:
 南二吊 吊钩顶部浪风吊身处NCR.
 吊钩吊钩吊钩, 吊钩吊钩吊钩

Transmitted by: Ken Lee Transportation Engineer
 Attachments: ZPMC-0568

cc: Rick Morrow, Gary Pursell, Mark Woods, Scott Kennedy
 File: 05.03.06

Handwritten signature and date: 2010.1.14

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000595

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 04-Jan-2010

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

NCR #: ZPMC-0568

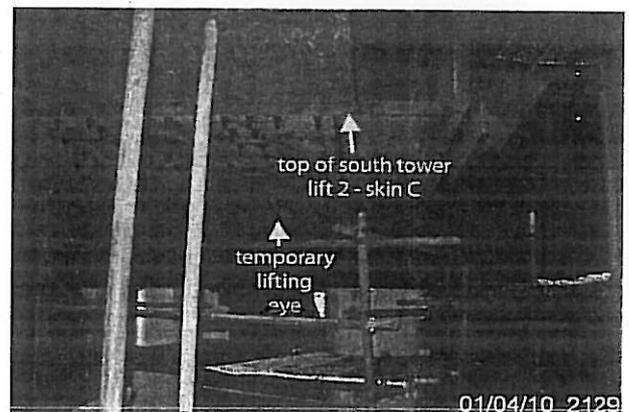
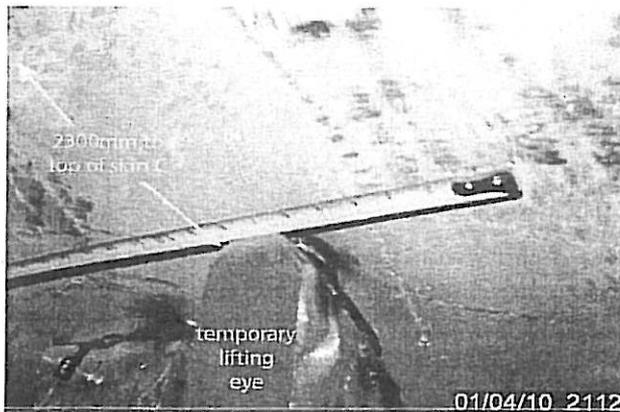
Type of problem:

Welding Concrete Other
 Welding Curing Procedural Bridge No: 34-0006
 Joint fit-up Coating Other Component: South Tower
 Procedural Procedural Description: South Tower, Lift 2

Reference Description: Inadequate preheat on South Tower, Lift 2, Skin C Temporary Lifting Eye

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Applicable reference:

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Who discovered the problem: George Goulet

Name of individual from Contractor notified: Yang Ye Heng

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Time and method of notification: 1/4/2010, 21:30; Verbal

Name of Caltrans Engineer notified: Scott Kennedy

Time and method of notification: 1/5/2010, 13:00; Verbal

QC Inspector's Name: Du Zhi Qun

Was QC Inspector aware of the problem: Yes No

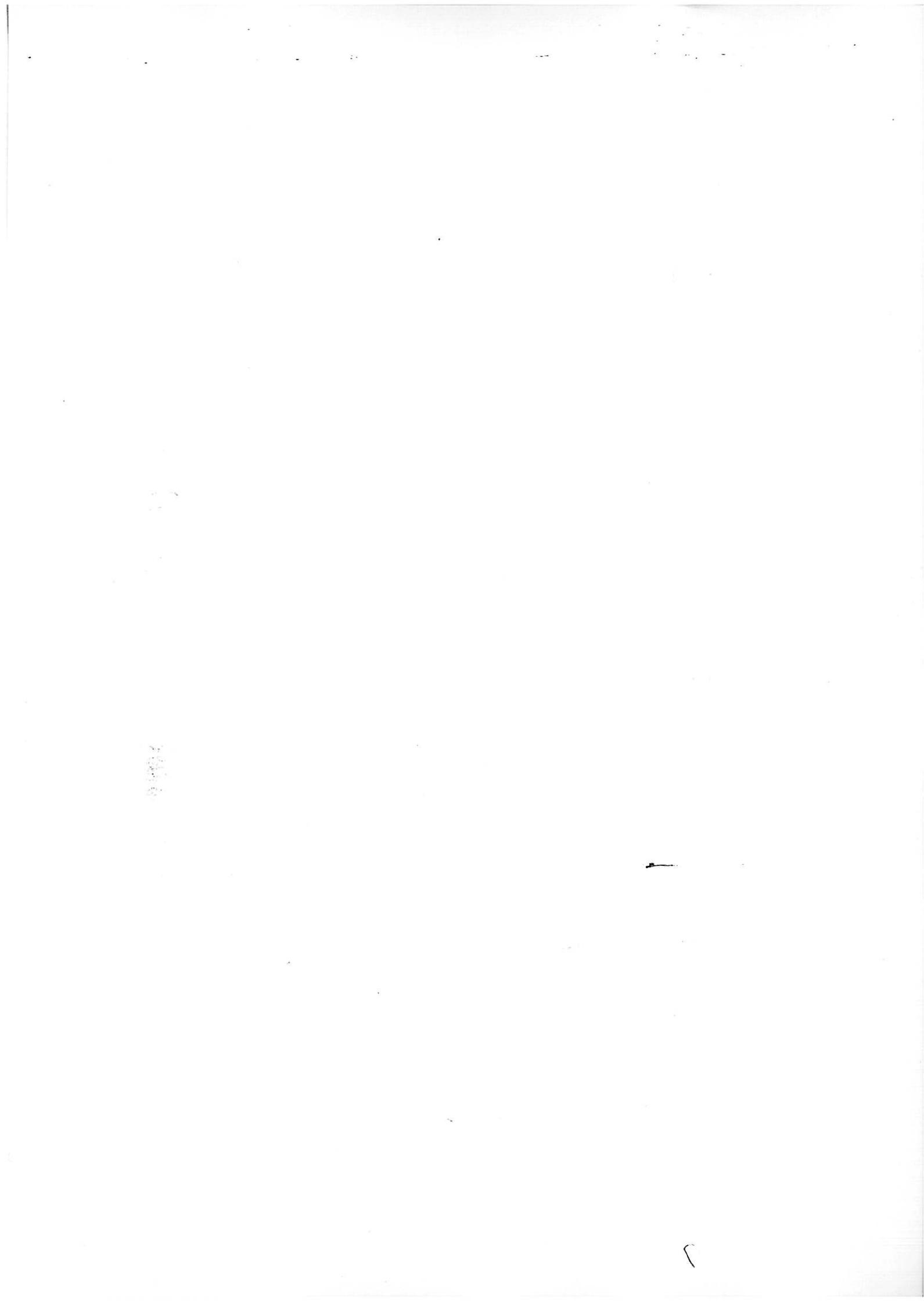
Contractor's proposal to correct the problem:

Comments:

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Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	Wahbeh,Mazen	SMR
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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-000477**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:****Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0568**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-Jan-2010**Description of Non-Conformance:**

During in-process Visual Testing (VT) of South Tower, Lift 2, Skin C, QA observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of partial joint penetration weld attaching a temporary lifting eye plate without sufficient base material preheat. A 110 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt.

Contractor's proposal to correct the problem:

Verify welds are acceptable, incorporate temporary welds into the scope of WRR documentation so that welding parameters are clear to production and QC staff.

Corrective action taken:

Documentation for MT verification of the temporary weld was provided (T787-MT-7883). ZPMC will submit WRRs for future repairs of temporary welds.

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: Guest, Skyler

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer