

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



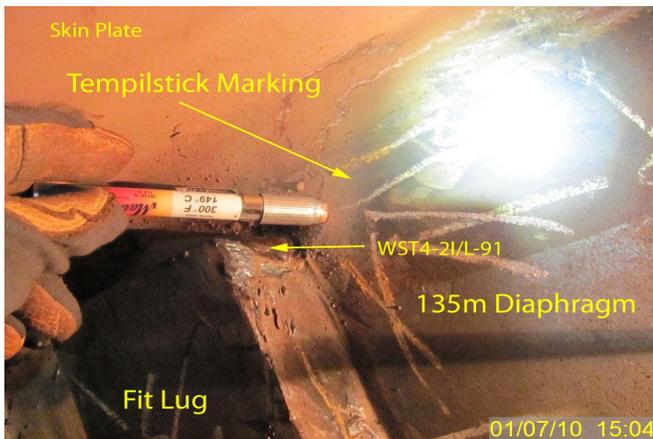
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-000612**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0585**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: West Tower Lift 4
Procedural	Procedural	Description:	

Reference Description: The Preheat temperature degree is under the WPS 345 minimum requirement**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no: WST4-2I/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstick temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No: 345-SMAW-1G(1F) Repair requires minimum temperature of 160 degree Celsius.

**Applicable reference:**

Welding Procedure Specification WPS-345-SMAW-1G (1F) Repair, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 160° 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: Surendra Prabhu

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Yuanmao You
Time and method of notification: 01/07/2010, 15:50 hours, verbal
Name of Caltrans Engineer notified: Scott Kennedy
Time and method of notification: 01/08/2010, 0815, verbal
QC Inspector's Name: Xujin Long
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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Ng,Michael	QA Inspector
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: 08-Jan-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-0585

Job Name: SAS Superstructure
Document No: 05.03.06-000575

Reference Description: Inadequate Preheat/ West Tower Lift 4/ Fit Lug

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:** 04

Remarks:

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no:WST4-2I/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No:345-SMAW-1G(1F)-Repair requires minimum temperature of 160 degree Celsius.

Welding Procedure Specification WPS-345-SMAW-1G(1F)-Repair, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 160° 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.

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

Transmitted by: Ken Lee Transportation Engineer
Attachments: ZPMC-0585

NCT

(Continued Page 2 of 2)

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: 05.03.06-000575

Subject: NCR No. ZPMC-0585

Dated: 09-Feb-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000587 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: At the time the temperature was taken work had ceased which was confirmed by the ZPMC QC and welder. ZPMC will conduct NDT 72 hours after the weld is complete.

At the time the temperature was taken work had ceased which was confirmed by the ZPMC QC and welder. ZPMC will conduct NDT 72 hours after the weld is complete. Based on this ZPMC request closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000587R00;

Caltrans' comments:

Status: REJ

Date: 09-Feb-2010

The Department will consider closure of this NCR once the required documentation is submitted and reviewed.

The required documentation should include NDT results and also address the failure of the Quality Control to identify the inadequate preheat. In addition, please provide documentation of the steps/actions taken by Production and Quality Control to prevent future occurrences as well as detail what steps/actions are being taken by ABFJV to address the quality control failures of ABFJV's fabricator/ZPMC.

Submitted by: Lee, Ken

Date: 09-Feb-2010

Attachment(s):



No. T-114

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-2-09

REGARDING: NCR-000612(ZPMC-0585)

ZPMC received NCR-000612(ZPMC-0585), it mentioned that CT inspector observed ZPMC personnel performing SMAW of weld no: WST4-2IL-91 attaching to diaphragm to fit lug inside of west tower lift 4 skin D without sufficient base material preheat.

This was confirmed with the welder and QC, they said the welding had stopped for a while when CT inspector performed the inspection. So, ZPMC has the doubt about the correctness of the NCR. As to a preciseness attitude to this disputed weld, ZPMC will conduct a NDT after 72 hours to test this weld and submit NDT Inspection Notification Sheet to CT inspector.

ZPMC hope CT could close this NCR at that time.

ATTACHMENT:

NCR-000612(ZPMC-0585)


2010-2-9

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

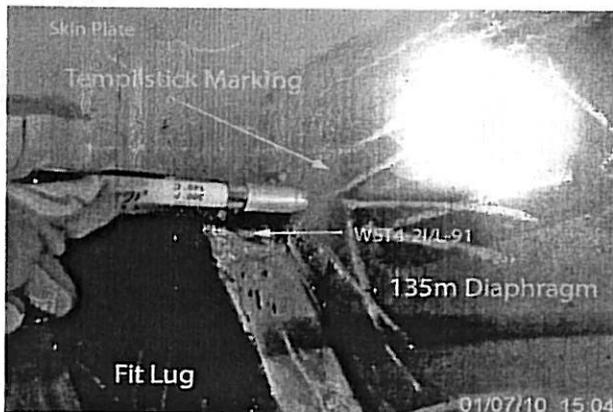
Quality Assurance and Source Inspection



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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-000612**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0585**Type of problem:**Welding Concrete Other Welding Curing Procedural **Bridge No:** 34-0006Joint fit-up Coating Other **Component:** West Tower Lift 4Procedural Procedural Description:**Reference Description:** The Preheat temperature degree is under the WPS 345 minimum requirement**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no: WST4-2/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstick temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No: 345-SMAW-1G(1F) Repair requires minimum temperature of 160 degree Celsius.

**Applicable reference:**

Welding Procedure Specification WPS-345-SMAW-1G (1F) Repair, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 160° 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: Surendra Prabhu

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Yuanmao You
Time and method of notification: 01/07/2010, 15:50 hours, verbal
Name of Caltrans Engineer notified: Scott Kennedy
Time and method of notification: 01/08/2010, 0815, verbal
QC Inspector's Name: Xujin Long
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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Ng, Michael

QA Inspector

Reviewed By: Wahbeh, Mazen

SMR

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000575

Subject: NCR No. ZPMC-0585

Dated: 07-Jul-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000587 Rev: 01

Contractor's Proposed Resolution:

Reference Resolution: In order to resolve the disputed events that occurred on the shop floor ZPMC is providing NDT documentation that the weld in question is acceptable.

ZPMC disputes that there was insufficient preheat at the time of welding and the Department's inspector made observations during a lull in welding activity. In order to resolve the disputed events that occurred on the shop floor ZPMC is providing NDT documentation that the weld in question is acceptable. Because the facts of this NCR are disputed by both the Department and ZPMC, ZPMC maintains that this was not a lapse in QC coverage and therefore is not providing the explanation of corrective actions. Based on the acceptable NDT results ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000587R01;

Caltrans' comments:

Status: CLO

Date: 08-Jul-2010

Please note that the original NCR references the incorrect weld number. The correct weld is WSTL4-2I/L-132 instead of WSTL4-2I/L-91. The documentation received is sufficient and the Department now considers NCR-0585 closed.

Submitted by: Rizzardo, Gina

Attachment(s):

Date: 08-Jul-2010



No. T-148

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2010-07-07

REGARDING: NCR-000612(ZPMC-0585)

ZPMC received NCR-000612(ZPMC-0585), it mentioned that CT inspector observed ZPMC personnel performing SMAW of weld no: WST4-2IL-91 attaching to diaphragm to fit lug inside of west tower lift 4 skin D without sufficient base material preheat.

This was confirmed with the welder and QC, they said the welding had stopped for a while when CT inspector performed the inspection. So, ZPMC has the doubt about the correctness of the NCR. As to a preciseness attitude to this disputed weld, ZPMC conducted a NDT after 72 hours to test this weld and submit NDT Inspection Notification Sheet to CT inspector. Here attached NDT report to show the weld sound well.

ZPMC hope CT can take a review and could close this NCR.

ATTACHMENT:

NCR-000612(ZPMC-0585)

T787-MT-9010

Zhao jia neng
2010.7.7



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: 08-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: 05.03.06-000575

Subject: NCR No. ZPMC-0585

Reference Description: Inadequate Preheat/ West Tower Lift 4/ Fit Lug

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:** 04

Remarks:

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no:WST4-2I/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No:345-SMAW-1G(1F)-Repair requires minimum temperature of 160 degree Celsius.

Welding Procedure Specification WPS-345-SMAW-1G(1F)-Repair, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 160° 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.

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

Transmitted by: Ken Lee Transportation Engineer
Attachments: ZPMC-0585

02.02.15.04
NCT 05.03.06-000575,NCT

Received
NCT-000575 08 Jan 10 Page 1 of 2

NCT

(Continued Page 2 of 2)

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

File: 05.03.06

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
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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, P.R. China

Report No: NCR-000612

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Jan-2010

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

NCR #: ZPMC-0585

Type of problem:

Welding Concrete Other
 Welding Curing Procedural **Bridge No:** 34-0006
 Joint fit-up Coating Other **Component:** West Tower Lift 4
 Procedural Procedural **Description:**

Reference Description: The Preheat temperature degree is under the WPS 345 minimum requirement

Description of Non-Conformance:

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no: WST4-2I/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstick temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No: 345-SMAW-1G(1F) Repair requires minimum temperature of 160 degree Celsius.



Applicable reference:

Welding Procedure Specification WPS-345-SMAW-1G (1F) Repair, designated as the applicable WPS by ZPMC QC, requires a minimum preheat temperature of 160° 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: Surendra Prabhu

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of individual from Contractor notified: Yuanmao You
Time and method of notification: 01/07/2010, 15:50 hours, verbal
Name of Caltrans Engineer notified: Scott Kennedy
Time and method of notification: 01/08/2010, 0815, verbal
QC Inspector's Name: Xujin Long
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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Ng, Michael	QA Inspector
Reviewed By: Wahbeh, Mazen	SMR



REPORT OF MAGNETIC PARTICLE EXAMINATION

磁粉检测报告

REPORT NO. 报告编号 T787-MT-9010 DATE日期 2010.06.01 PAGE OF页码 1/1 Revision No: 0

PROJECT NO. 工程编号: ZP06-787 CONTRACTOR: 用户: CALTRANS

DRAWING NO. 图号: WSTL4-2G/L,H/L,I/L,K/L Tower(W) 4th lifting skin B fit lug plate and longitudinal CALTRANS CONTRACT NO.: 加州工程编号 04-0120F4

REFERENCING CODE 参考规范编码: AWS D1.5-2002 ACCEPTANCE STANDARD 接受标准: AWS D1.5-2002 PROCEDURE NO. 程序编号: ZPQC-MT-01 CALIBRATION DUE DATE 仪器校正有效期: Dec. 28ST, 2010

EQUIPMENT 设备: MT YOKE MANUFACTURER 制造商: PARKER MODEL NO. 样式编号: B310S SERIAL NO. 连续编号: 5620 5395 5617

MAGNETIZING METHOD 磁化方法: Continuous magnetic yoke 磁轭式连续法 CURRENT 电流: AC

PARTICLE TYPE 磁粉类型: Dry magnet powder 干磁粉 YOKE SPACING 磁轭间距: 70~150mm

MATERIAL TO BE EXAMINED 检测材料: WELDING 焊接件 CASTING 铸件 FORGING 锻造 Material & thickness 母材,厚度: A709M-345T2-Z/A709M-HPS485WT2-Z 25/70mm

WELDING PROCESS 焊接方法: FCAW TYPE OF JOINT 焊缝类型: T-JOINT

WELD I.D. 焊缝编号	DISCONTINUITY不连续性			ACCEPT 接受	REJECT 拒收	REMARKS 备注
	INDICATION 指示	TYPE 类型	LENGTH IN mm 长度			
WSTL4-2G/L-23				ACC.		100%MT
WSTL4-2G/L-19				ACC.		100%MT
WSTL4-2G/L-92				ACC.		100%MT
WSTL4-2H/L-18				ACC.		100%MT
WSTL4-2H/L-91				ACC.		100%MT
WSTL4-2H/L-20				ACC.		100%MT
WSTL4-2H/L-131				ACC.		100%MT
WSTL4-2I/L-22				ACC.		100%MT
WSTL4-2I/L-132				ACC.		100%MT
WSTL4-2K/L-22				ACC.		100%MT
WSTL4-2K/L-132				ACC.		100%MT

BLANK

EXAMINED BY主探: Cai Xinxin 2010.6.1

REVIEWED BY审核: [Signature] 6/1/2010

LEVEL - II SIGN 签名 / DATE日期

LEVEL-II SIGN / DATE日期

质量经理 / QCM

用户CUSTOMER

签字 SIGN / 日期 DATE

签字 SIGN / 日期 DATE

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-000736**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Jul-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0585**Type of problem:**

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

Date the Non-Conformance Report was written: 07-Jan-2010**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) observed ZPMC personnel performing Shielded Metal Arc Welding (SMAW) of weld no: WST4-2I/L-91 attaching to diaphragm to fit lug inside of West tower, lift 4, skin D (75 mm thickness), without sufficient base material preheat. This work was observed at the 135m double diaphragm. CT QA observed a 149 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding did not melt. The applicable WPS No: 345-SMAW-1G(1F) Repair requires minimum temperature of 160 degree Celsius.

Contractor's proposal to correct the problem:

ZPMC did not agree that there was insufficient preheat at the time of welding and the Department's inspector made observations during a lull in the welding activity. In order to resolve the disputed events that occurred on the shop floor ZPMC is providing NDT documentation to confirm that the weld in question is acceptable.

Corrective action taken:

The original NCR references the incorrect weld no. The correct weld is WSTL4-2I/L-132 instead of WSTL4-2I/L-91. NDT reports provided confirming the weld was unaffected.

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: Ng, Michael

Quality Assurance Inspector

Reviewed By: Devey, Jim

QA Reviewer