

**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, China**Report No:** NCR-000905**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 24-Nov-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0867**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> Lift 13CE, DP3106C-001-112
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** New Welding Procedure Not Followed (Rager/McQuaid)**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process observations of the fabrication of OBG Lift 13CE in Bay # 14, this Caltrans QA Inspector observed the following:

ZPMC welding personnel did not appear to be following the New Weld Procedure.

The following requirement was not followed:

2. Assembly (2F)

- ZPMC personnel performed welding for the fillet weld between deck panel diaphragm (X3588C) and deck panel "U" rib without adequate preheating of the adjacent base material.

-During the welding This QA Inspector observed a 140 degree Celsius Tempstick did not melt when applied to the adjacent base material.

-Weld number identified as DP3106C-001-112

-The welding performed with Flux Cored Arc Welding (FCAW) process.

-Area was being preheated using electric strip heaters.

-DP3106C was located in Bay # 14

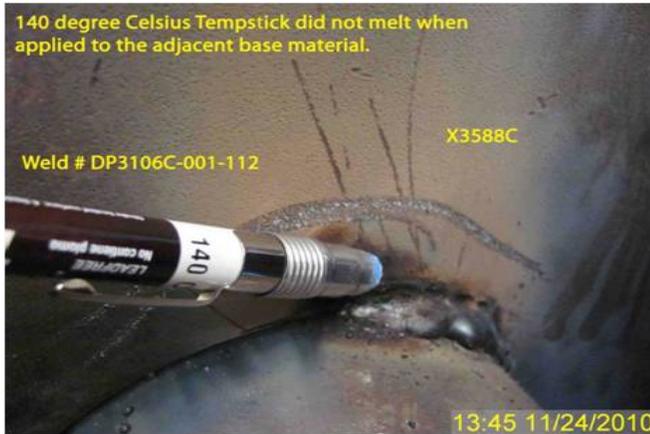
See attached photographs for additional detail.

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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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### Applicable reference:

NEW WELD PROCEDURE (Rager/McQuaid)

2) Assembly: F. Preheat shall be applied in such manner to provide a minimum temperature in the area of the weld 165 degree Celsius

**Who discovered the problem:** Shrikant Utekar

**Name of individual from Contractor notified:** Peter Shaw

**Time and method of notification:** General Notification Given 11/23/10

**Name of Caltrans Engineer notified:** Laraine Woo

**Time and method of notification:** 13:00hrs, Email, 11/25/10

**QC Inspector's Name:** Wang Lu (Testino)

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

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

NA

### 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.

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<b>Inspected By:</b>	Devey,Jim	SMR
<b>Reviewed By:</b>	Wahbeh,Mazen	SMR

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**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**

333 Burma Road  
Oakland CA 94607  
Tel: Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

<b>To:</b>	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	<b>Date:</b>	25-Nov-2010
<b>Dear:</b>	Mr. Charles Kanapicki	<b>Contract No:</b>	04-0120F4 04-SF-80-13.2 / 13.9
<b>Attention:</b>	Mr. Thomas Nilsson    Project/Fabrication Manager	<b>Job Name:</b>	SAS Superstructure
<b>Subject:</b>	NCR No. ZPMC-0867	<b>Document No:</b>	05.03.06-000862

**Reference Description:** New Welding Procedure Not Followed (Rager/McQuaid)

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:** 13

**Remarks:**

During the Quality Assurance (QA) random in-process observations of the fabrication of OBG Lift 13CE in Bay # 14, this Caltrans QA Inspector observed the following:  
ZPMC welding personnel did not appear to be following the New Weld Procedure (Rager/McQuaid).  
The following requirement was not followed:

2. Assembly (2F)

- ZPMC personnel performed welding for the fillet weld between deck panel diaphragm (X3588C) and deck panel "U" rib without adequate preheating of the adjacent base material.
- During the welding, this QA Inspector observed a 140 degree Celsius Tempstick did not melt when applied to the adjacent base material.
- Weld number identified as DP3106C-001-112
- The welding performed with Flux Cored Arc Welding (FCAW) process.
- Area was being preheated using electric strip heaters.
- DP3106C was located in Bay # 14

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

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Laraine Woo      Transportation Engineer

**Attachments:** ZPMC-0867

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# NCT

( *Continued Page 2 of 2* )

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**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Contract Files, Ching Chao, Bill Casey

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000862

**Subject:** NCR No. ZPMC-0867

**Dated:** 01-Dec-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000860 **Rev:** 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** As this NCR was written without a contractual basis it should be withdrawn.

The "NEW WELD PROCEDURE (Rager/McQuaid)" quoted as the basis for this NCR is not a contract document only a recommendation from the QA/QC Committee. If the Department wants to incorporate the QA/QC committee's recommendations as a contract requirement a contract change order should be issued. As this NCR was written without a contractual basis it should be withdrawn.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000860R00

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**Caltrans' comments:**

**Status:** REJ

**Date:** 03-Dec-2010

CT acknowledges contractor's response. However, successful NDT will close this NCR.

**Submitted by:** Chao, Ching

**Attachment(s):**

**Date:** 03-Dec-2010

## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000862

**Subject:** NCR No. ZPMC-0867

**Dated:** 08-Dec-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000860 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** We understand your response and we will not submit the normal NCR closure package with NDT reports for this and expect that CT will close these as the green tags for these components are issued.

We understand your response and we will not submit the normal NCR closure package with NDT reports for this and expect that CT will close these as the green tags for these components are issued.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000860R01

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### Caltrans' comments:

**Status:** REJ

**Date:** 09-Dec-2010

Normal NCR closure package with NDT reports shall be submitted with the NPR to close out the NCR.

**Submitted by:** Woo, Laraine

**Date:** 09-Dec-2010

**Attachment(s):**

## NCR PROPOSED RESOLUTION

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

**Attention:** Siegenthaler, Peter  
Resident Engineer

**Ref:** 05.03.06-000862

**Subject:** NCR No. ZPMC-0867

**Dated:** 01-Mar-2011

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000860 Rev: 02

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC is providing acceptable NDT of the weld referenced in the NCR and requests closure of this NCR.

ZPMC is providing acceptable NDT of the weld referenced in the NCR and requests closure of this NCR. This weld was misidentified in the NCR as DP3106C-001-112, the actual weld ID is DP3106B-001-112

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000860R02;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 02-Mar-2011

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0867 is closed.

**Submitted by:** Eagen, Sean

**Attachment(s):**

**Date:** 02-Mar-2011



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-34975      DATE日期 2011.01.15      PAGE OF 页码 1/21      Revision No: 0

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

DRAWING NO. 图号: DP3105/3106/3106B/3107      CALTRANS CONTRACT NO.: 04-0050F4  
 13CE DECK PLATE CONNECTION PLATE      加州工程编号

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. 28 <sup>ST</sup> , 2011
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EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 7456
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MAGNETIZING METHOD 磁化方法 Continuous magnetic yoke 磁轭式连续法	CURRENT 电流 AC
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PARTICLE TYPE 磁粉类型 Dry magnet powder 干磁粉	YOKE SPACING 磁轭间距 70~150mm
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MATERIAL TO BE EXAMINED 检测材料 <input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材, 厚度 A709M-345T2-X 12/14/20mm
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WELDING PROCESS 焊接方法 FCAW	TYPE OF JOINT 焊缝类型 T-JOINT
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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			
DP3105-001-007				ACC.		100%
DP3105-001-014				ACC.		100%
DP3105-001-017				ACC.		100%
DP3105-001-022				ACC.		100%
DP3105-001-025				ACC.		100%
DP3105-001-030				ACC.		100%
DP3105-001-033				ACC.		100%
DP3105-001-040				ACC.		100%
DP3105-001-043				ACC.		100%
DP3105-001-048				ACC.		100%
DP3105-001-053				ACC.		100%
DP3105-001-056				ACC.		100%
DP3105-001-059				ACC.		100%
DP3105-001-066				ACC.		100%
DP3105-001-069				ACC.		100%
DP3105-001-074				ACC.		100%

EXAMINED BY 主探 Ji Fei <i>Ji Fei</i> LEVEL - II SIGN 签名 / DATE 日期 2011.01.15 质量经理 / QCM <i>[Signature]</i> 签字 SIGN / 日期 DATE 2011.01.15	REVIEWED BY 审核 Wang Wei <i>Wang Wei</i> LEVEL - II SIGN / DATE 日期 2011.01.15 用户 CUSTOMER _____ 签字 SIGN / 日期 DATE _____
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# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-34975		DATE日期 2011.01.15	PAGE OF页码 16/21	Revision No: 0
PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS		
DRAWING NO. 图号: DP3105/3106/3106B/3107 13CE DECK PLATE CONNECTION PLATE		CALTRANS CONTRACT NO.: 加州工程编号 04-0050F4		
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. 28 <sup>ST</sup> , 2011	
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 7456	
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	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材,厚度	A709M-345T2-X 12/14/20mm	
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			
DP3106B-001-060				ACC.		100%
DP3106B-001-061				ACC.		100%
DP3106B-001-070				ACC.		100%
DP3106B-001-071				ACC.		100%
DP3106B-001-078				ACC.		100%
DP3106B-001-079				ACC.		100%
DP3106B-001-086				ACC.		100%
DP3106B-001-087				ACC.		100%
DP3106B-001-096				ACC.		100%
DP3106B-001-097				ACC.		100%
DP3106B-001-104				ACC.		100%
DP3106B-001-105				ACC.		100%
DP3106B-001-112				ACC.		100%
DP3106B-001-113				ACC.		100%
DP3106B-001-122				ACC.		100%
DP3106B-001-123				ACC.		100%

EXAMINED BY主探 Ji Fei <u>Ji Fei</u> LEVEL-II SIGN 签名 / DATE日期 2011.01.15	REVIEWED BY审核 <u>Way Wei</u> LEVEL-II SIGN / DATE日期 2011.01.15
质量经理 / QCM <u>[Signature]</u> 签字 SIGN / 日期 DATE 2011.01.15	用户CUSTOMER _____ 签字 SIGN / 日期 DATE



# REPORT OF MAGNETIC PARTICLE EXAMINATION

## 磁粉检测报告

REPORT NO. 报告编号 B787-MT-34975      DATE日期 2011.01.15      PAGE OF 页码 21/21      Revision No: 0

PROJECT NO. 工程编号: ZP06-787		CONTRACTOR: 用户: CALTRANS	
DRAWING NO. 图号: DP3105/3106/3106B/3107 13CE DECK PLATE CONNECTION PLATE		CALTRANS CONTRACT NO.: 加州工程编号 04-0050F4	
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. 28 <sup>ST</sup> , 2011
EQUIPMENT 设备 MT YOKE	MANUFACTURER 制造商 PARER	MODEL NO. 样式编号 B310S	SERIAL NO. 连续编号 7456
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	<input checked="" type="checkbox"/> WELDING 焊接件 <input type="checkbox"/> CASTING 铸件 <input type="checkbox"/> FORGING 锻造	Material & thickness 母材,厚度	A709M-345T2-X  12/14/20mm
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			
DP3107-001-035				ACC.		100%
DP3107-001-042				ACC.		100%
DP3107-001-050				ACC.		100%
DP3107-001-058				ACC.		100%
DP3107-001-063				ACC.		100%
DP3107-001-068				ACC.		100%
DP3107-001-076				ACC.		100%
DP3107-001-084				ACC.		100%
DP3107-001-089				ACC.		100%
DP3107-001-094				ACC.		100%
DP3107-001-102				ACC.		100%
DP3107-001-110				ACC.		100%
DP3107-001-115				ACC.		100%
DP3107-001-120				ACC.		100%
DP3107-001-128				ACC.		100%
DP3107-001-136				ACC.		100%

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EXAMINED BY 主探 Ji Fei <u>Ji Fei</u> LEVEL - II SIGN 签名 / DATE日期 2011.01.15	REVIEWED BY 审核 <u>Wang wei</u> LEVEL 审核 SIGN / DATE日期 2011.01.15
质量经理 / QCM <u>[Signature]</u> 签字 SIGN / 日期 DATE 2011.01.15	用户 CUSTOMER _____ 签字 SIGN / 日期 DATE

**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, China**Report No:** NCS-000900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 02-Mar-2011**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0867**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:** 24-Nov-2010**Description of Non-Conformance:**

During the Quality Assurance (QA) random in-process observations of the fabrication of OBG Lift 13CE in Bay # 14, this Caltrans QA Inspector observed the following:

ZPMC welding personnel did not appear to be following the New Weld Procedure.

The following requirement was not followed:

2. Assembly (2F)

- ZPMC personnel performed welding for the fillet weld between deck panel diaphragm (X3588C) and deck panel "U" rib without adequate preheating of the adjacent base material.

-During the welding This QA Inspector observed a 140 degree Celsius Tempstick did not melt when applied to the adjacent base material.

-Weld number identified as DP3106C-001-112

-The welding performed with Flux Cored Arc Welding (FCAW) process.

-Area was being preheated using electric strip heaters.

-DP3106C was located in Bay # 14

See attached photographs for additional detail.

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

Contractor will provide the NDT report to prove the weld is acceptable.

**Corrective action taken:**

Contractor provided the NDT report. The report shows the weld is acceptable. The Weld ID DP3106C-001-112 referenced in the NCR has been changed to DP3106B-001-112.

**Did corrective action require Engineer's approval?**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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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 Wahbeh, Mazen 818-292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:**    Ng,Michael

Quality Assurance Inspector

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**Reviewed By:**    Wahbeh,Mazen

QA Reviewer