

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, P.R. China

Report No: NCR-000688

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 26-Feb-2010

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

NCR #: ZPMC-0655

Type of problem:

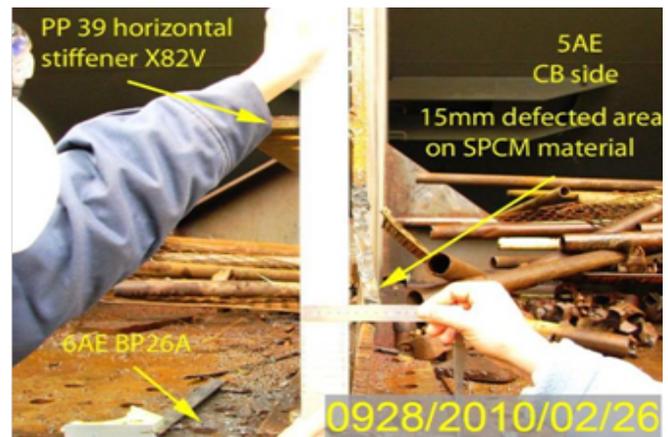
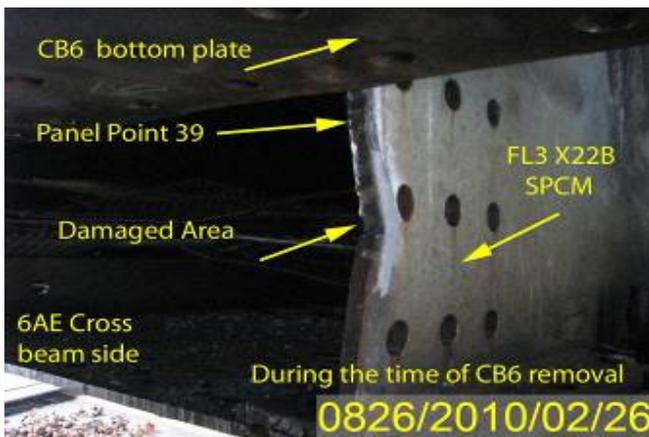
Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG Segment 6AE FL3
Procedural	Procedural	Description: Damaged SPCM component during transportation	

Reference Description: OBG Segment 6AE FL3 at PP39 was damaged during the transportation of the Crossbeam

Description of Non-Conformance:

During random in process observations of Cross Beam 6 being removed from OBG Trial Assembly line, this Caltrans Quality Assurance Inspector observed the following issue:

- One (1) damaged/bent FL3 plate member damaged at panel point (PP) 39 at Segment 6AE.
- The damaged plate is designated as X22B
- Length of deflected area is over approximately 250mm in length at the lower portion of the plate.
- The maximum deflection of 15mm is measured using a 1000mm straight edge.
- The steel material is designated as Seismic Performance Critical Member (SPCM).
- The OBG 6AE segment is located at the Trial Assembly yard.



QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



Applicable reference:

-Standard Specifications July 1999, Section 55-1.04; "In handling of the steel work, every care shall be taken to avoid bending, scraping or overstressing the pieces. All pieces bent or otherwise injured will be rejected."

-Standard Specifications July 1999, Section 55-3.09; "Finished members shall be true to line and free from twists, bends and open joints."

Who discovered the problem: Joe Alaniz

Name of individual from Contractor notified: CK Chan

Time and method of notification: 0900 hours, 02/26/10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1100 hours, 02/26/10, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

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, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By:	Tsang, Eric	SMR
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:	26-Feb-2010
Dear:	Mr. Charles Kanapicki	Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Job Name:	SAS Superstructure
Subject:	NCR No. ZPMC-0655	Document No:	05.03.06-000645

Reference Description: OBG Segment 6AE FL3 at PP39 was damaged during the transportation of the Crossbeam

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:** 06

Remarks:

During random in process observations of Cross Beam 6 being removed from OBG Trial Assembly line, this Caltrans Quality Assurance Inspector observed the following issue:

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- The steel material is designated as Seismic Performance Critical Member (SPCM).
- The OBG 6AE segment is located at the Trial Assembly yard.

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: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0655

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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: 05.03.06-000645

Subject: NCR No. ZPMC-0655

Dated: 29-Mar-2010

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000638 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has repaired the floorbeam with heat straightening and is providing the heat straightening report used and the hardness testing results after to show that the base metal is acceptable.

ZPMC has repaired the floorbeam with heat straightening and is providing the heat straightening report used and the hardness testing results after to show that the base metal is acceptable. These results have been accepted my CT METS. Based on this ZPMC requests closure of this NCR.

Submitted by: Ishibashi, Joshua

Attachment(s): ABF-NPR-000638R00;

Caltrans' comments:

Status: CLO

Date: 05-Apr-2010

This proposed resolution is acceptable. The documentation received is sufficient and the Department concurs that Non-Conformance ZPMC-0655 is closed.

Submitted by: Eagen, Sean

Attachment(s):

Date: 05-Apr-2010



No. B-712

LETTER OF RESPONSE

TO: American Bridge/Flour

DATE: 2010-3-29

REGARDING: NCR-000688 (ZPMC-0655)

ZPMC performed heat straightening and has fixed the deflection on FL3. Due to the heat straightening procedure was rejected by engineer and to verify the base metal's soundness, hardness testing was performed. After verification by hardness testing the base metal was found to be acceptable by QCM. ZPMC is providing the HSR and hardness testing result, requests this NCR to be closed.

ATTACHMENT:

NCR-000688 (ZPMC-0655)

HSR(B)-357

HARDNESS TESTING REPORT REV.2

Lee W
3/29/10



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: 26-Feb-2010
Contract No: 04-0120F4
04-SF-80-13.2 / 13.9
Job Name: SAS Superstructure
Document No: 05.03.06-000645

Dear: Mr. Charles Kanapicki
Attention: Mr. Thomas Nilsson Project/Fabrication Manager
Subject: NCR No. ZPMC-0655

Reference Description: OBG Segment 6AE FL3 at PP39 was damaged during the transportation of the Crossbeam

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

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- 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: 06

Remarks:

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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: Bill Howe Sr. Transportation Engineer

Attachments: ZPMC-0655

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao
File: 05.03.06

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000688

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 26-Feb-2010

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

NCR #: ZPMC-0655

Type of problem:

Welding Concrete Other

Welding Curing Procedural

Joint fit-up Coating Other

Procedural Procedural Description: Damaged SPCM component during transportation

Bridge No: 34-0006

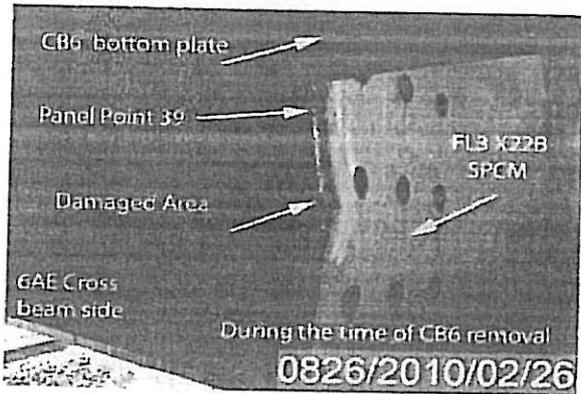
Component: OBG Segment 6AE FL3

Reference Description: OBG Segment 6AE FL3 at PP39 was damaged during the transportation of the Crossbeam

Description of Non-Conformance:

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QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)



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Time and method of notification: 0900 hours, 02/26/10, Verbal

Name of Caltrans Engineer notified: Bill Howe

Time and method of notification: 1100 hours, 02/26/10, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

N/A

Comments:

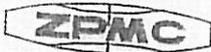
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

SMR

Reviewed By: Wahbeh, Mazen

SMR



火工校正报告

Heat Straightening Report(HSR)

报告号 Report#

HSR(B)-357

版本号 Revision #

0

日期 Date

2010.02.26

美国海湾大桥 San Francisco Oakland Bay Bridge

CALTRANS #04-0120F4

工程编号 JOB#: ZP06-787

装配 Assembly:

部装 Sub-Assembly:

梁段 Gird: Floorbeam 6AE

塔段 Tower:

焊缝号 Weld No: 128

N/A

焊缝地图号 Weld Map No: FB030A-002

情况描述 Description of Condition

Cause 原因: Welding distortion 焊接变形

Type of Defect 缺陷类型: Welding distortion 焊接变形

Inspection Method 检查方法: Visual 目检

处置方法 Disposition

缺陷去除方法 (Defect Removal Method): Flame Straightening by oxygen acetylene 运用氧乙炔进行校火

后续 NDE (Post-Removal NDE):

Jacking shall not be used to plastically deform the flange. The Jack shall only be used as a fixture. The weld of the heat area shall perform 100%VT, MT, UT after finishing heat straightening, according to the approved shop drawing. 不能使用千斤顶进行塑性变形。千斤顶只能用作固定装置。校火后需按照图纸上的要求对热影响区域进行 100%VT, MT, UT 检测。

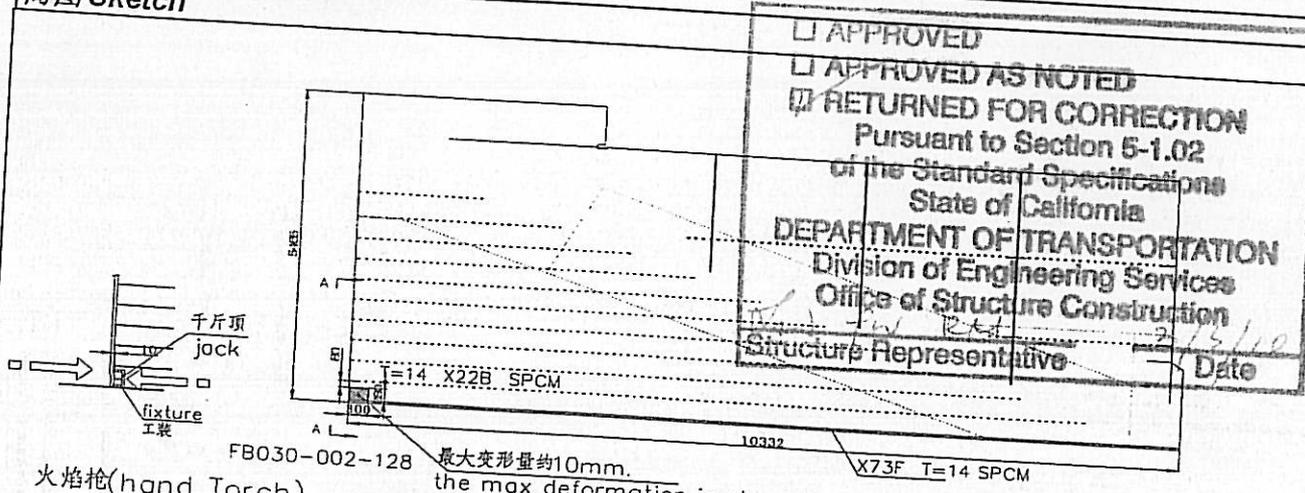
纠正措施 (Corrective Action(s)):

Increase the flange anti-deformation allowance during the course of fit-up, and Control the welding parameters according to associated WPS. 在装配的过程中增加反变形余量。根据相关 WPS 控制焊接参数。

实施次数 (Number of application): 1~3

最高温度 (Maximum temperature): <600°C

简图 Sketch



APPROVED
 APPROVED AS NOTED
 RETURNED FOR CORRECTION
 Pursuant to Section 5-1.02
 of the Standard Specifications
 State of California
 DEPARTMENT OF TRANSPORTATION
 Division of Engineering Services
 Office of Structure Construction
 Structure Representative
 Date: 2/28/10

火焰枪 (hand Torch)

FB030-002-128 最大变形量约 10mm.
 the max deformation is about 10mm.
 注: 最大变形量约 10mm, 用千斤顶将焊接变形量顶到位, 固定不动, 再进行火工校正。
 NOTE: the max deformation is about 10mm, Correct the welding distortion by use of jacking, and then perform heat straightening with the jack still on the flange plate.

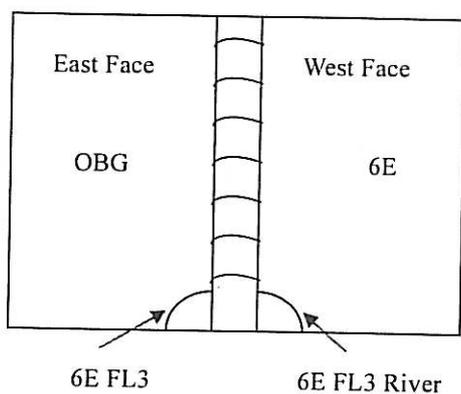
To be signed when Closing HSR~Verify compliance and all necessary reports are ready to attach

检验员 Inspector:		签字 Signature:	
CWI #		Closing Date:	
II 级探伤 NDE Certification:	Level II	审核日期 Review Date:	
质检经理 QC Manager			

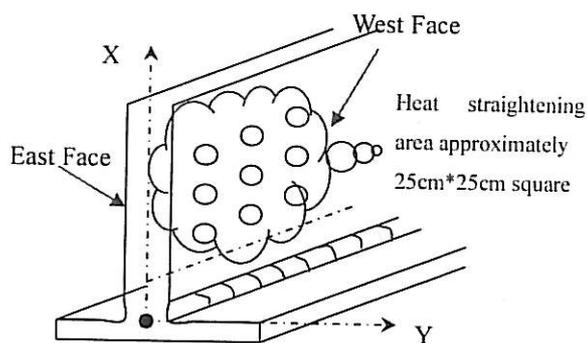
Note: All repair work shall be performed in accordance with applicable CALTRANS approved procedures, contract specifications and AWS D1.5 2002.

#R787-QCP-1100

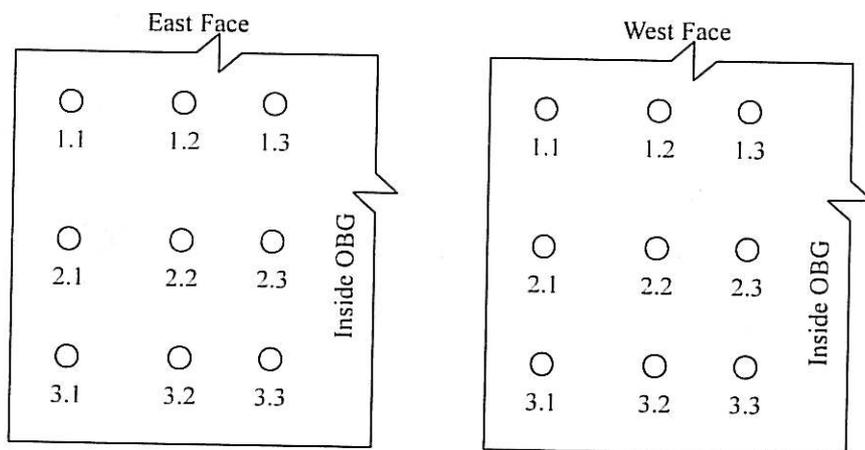
Hardness Testing Report Rev. 2



Sketch 1



Sketch 2



Sketch 3 Hardness Location Points

6E FL3 Hardness Test Result						
Hardness Tester Type: TH140						
Location	6E FL3 (East Face)			6E FL3 (West Face)		
	X	Y	Hardness	X	Y	Hardness
1.1	29cm	5cm	143 HB	29cm	5cm	143 HB
1.2	18cm	12.5cm	190 HB	18cm	12.5cm	159 HB
1.3	6.5cm	21cm	162 HB	6.5cm	21cm	175 HB
2.1	29cm	5cm	153 HB	29cm	5cm	151 HB
2.2	18cm	12.5cm	155 HB	18cm	12.5cm	180 HB
2.3	6.5cm	21cm	153 HB	6.5cm	21cm	174 HB
3.1	29cm	5cm	197 HB	29cm	5cm	154 HB
3.2	18cm	12.5cm	176 HB	18cm	12.5cm	170 HB
3.3	6.5cm	21cm	176 HB	6.5cm	21cm	160 HB

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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, P.R. China**Report No:** NCS-000591**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 15-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0655**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: 26-Feb-2010**Description of Non-Conformance:**

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Contractor's proposal to correct the problem:

Perform hardness testing to verify material quality.

Corrective action taken:

Contractor provided results of hardness tests verifying material affected by heat straightening conforms with Contract hardness requirements.

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 Jim Simonis 152.1675.3703, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim Quality Assurance Inspector**Reviewed By:** Wahbeh, Mazen QA Reviewer