

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-000213**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Nov-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0189**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006 L/R
Joint fit-up	Coating	Other	Component: Paint
Procedural	Procedural	Description: Painting of faying surfaces of Diagonal box beams	

Reference Description: Painting of faying surfaces of Diagonal box beams**Description of Non-Conformance:**

The Contractor has blasted and painted diagonal box beams and cover plates of faying surfaces after blasting an anchor profile of 132 μ , 118 μ and 100 μ . The contractor continued coating the components after measuring the excessive profiles. Attached are the QC reports depicting the readings.

Applicable reference:

Special Provisions, Sec. 10-1.69

"Blast cleaning shall leave surfaces with a dense, uniform, sharp angular anchor pattern of not less than 40 μ m nor more than 86 μ m as measured in conformance with the requirements in ASTM Designation: D 4417

Who discovered the problem: Caltrans Quality Assurance(QA), Mark Wright (reviewing QC reports)**Name of individual from Contractor notified:** ABF Quality Control Manager, Steve Lawton**Time and method of notification:** In person @ 1300 11/7/08**Name of Caltrans Engineer notified:** Stanley Ku**Time and method of notification:** Verbal 11/7/08**QC Inspector's Name:** Bill Oaks**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 , who represents the Office of Structural Materials for your project.

Inspected By: Dautermann,Peter

SMR

Reviewed By: Dautermann,Peter

SMR



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 18-Nov-2008

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Dave Williams Consultant

Document No: 05.03.06-000182

Subject: NCR No. ZPMC-0189

Reference Description: Painting of faying surfaces of Diagonal box beams

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:**

Remarks:

The Contractor has blasted and painted diagonal box beams and cover plates of faying surfaces after blasting an anchor profile of 132 μ , 118 μ and 100 μ . The contractor continued coating the components after measuring the excessive profiles.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0189

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom

File: 05.03.06

NCR PROPOSED RESOLUTION

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

Attention: Pursell, Gary
Resident Engineer

Ref: 05.03.06-000182

Subject: NCR No. ZPMC-0189

Dated: 18-Dec-2008

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000186 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC will reblast and coat the material that did not meet the acceptable Blast Profile conditions. Attached is a summary of parts that will be re-blasted.

Some of the Blast profiles have been identified as unacceptable. ABF has notified ZPMC of this non-conformance. It was observed that the blast media was too coarse, or for that matter, was a new grit since this early non-conforming profile condition, ZPMC has adjusted the Blast media to produce an acceptable profile in conformance with contract requirements. ZPMC will reblast and coat the material that did not meet the acceptable Blast Profile conditions. Attached is a summary of parts that will be re-blasted.

Submitted by:

Attachment(s): 22E06FE5-701A-4A68-982C-A8C3623FF488.PDF; ABF-NPR-000186R00

Caltrans' comments:

Status: AAP

Date: 21-Dec-2008

The response is acceptable, but the Non-Conformance is not closed.

After the parts are re-blasted, please provide documentation that an acceptable blast profile was achieved. The Department will review the Contractor's proposal to close Non-Conformance ZPMC-0189 at that time.

Submitted by: Wright, Doug

Date: 21-Dec-2008

Attachment(s):

 CT Rejected: But not in accordance with ASTM 4417 Method C (Average of 3 x Testex tests)

 ABF: Rejected

 Re-work required

NCR PROPOSED RESOLUTION

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

Dated: 08-Jan-2009

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

Attention: Pursell, Gary
Resident Engineer

Job Name: SAS Superstructure

Document No.: ABF-NPR-000186 Rev: 01

Ref: 05.03.06-000182

Subject: NCR No. ZPMC-0189

Contractor's Proposed Resolution:

Reference Resolution: ZPMC requests closure of this NCR based on attached documentation.

Please see attached documents.

Submitted by:

Attachment(s): ABF-NPR-000186R01; docs to close this NCR

Caltrans' comments:

Status: CLO

Date: 09-Feb-2009

The proposed resolution is acceptable. The parts were re-blasted, and acceptable blast profiles were achieved. The Department concurs that Non-Conformance ZPMC-0189 is closed.

Submitted by: Wright, Doug

Date: 09-Feb-2009

Attachment(s): NPR CT Comments



TRANSMITTAL LETTER

PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 12/30/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: CALTRANS NCR FOR CLOSURE

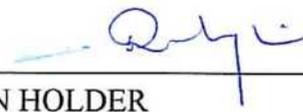
SUBMITTED FOR YOUR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.B-327 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER NCR-000213(ZPMC-0189).
- (3) COPY OF THE ACCEPTABLE RE-BLASTING REPORTS

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:



 PLAN HOLDER

RECEIVED 30 DEC 2008
 1415

 DATE



 COMPANY

 PHONE NO.

PLAN NUMBER: N/A

#R787-QCP-102



No. B-327

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2008-12-30

REGARDING: NCR-000213(ZPMC-0189)

With this letter of response, ZPMC requests closure for Caltrans NCR-000213(ZPMC-0189). We have reblast and coat the material that did not meet the acceptable blast profile condition. As the requirement of the response from caltrans that "please provide documentation that an acceptable blast profile was achieved", ZPMC is providing the new inspection reports as follow to prove the acceptable quality .

So ZPMC considers NCR-000213(ZPMC-0189) can be closed, and provide the attached documents to these weld crack repair.

Please check the attached documentation for acceptance and close the NCR-000213(ZPMC-0189).

ATTACHMENT:

NCR-000213(ZPMC-0189)

The acceptable re-blasting reports

zhao shuangbo

2008.12.30.

*Cung Kuo for
Steve Newton
FAA Manager
2008-12-30*



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV
375 BURMA ROAD
OAKLAND CA 95607

Date: 18-Nov-2008

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

Dear: Mr. Charles Kanapicki
Attention: Mr. Dave Williams Consultant

Job Name: SAS Superstructure

Subject: NCR No. ZPMC-0189

Document No: 05.03.06-000182

Reference Description: Painting of faying surfaces of Diagonal box beams

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:

Remarks:

The Contractor has blasted and painted diagonal box beams and cover plates of faying surfaces after blasting an anchor profile of 132 μ , 118 μ and 100 μ . The contractor continued coating the components after measuring the excessive profiles.

Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0189

cc: Rick Morrow, Gary Pursell, Brian Boal, Jason Tom

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, PRC

Report No: NCR-000213

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 07-Nov-2008

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

NCR #: ZPMC-0189

Type of problem:Welding Concrete Other Welding Curing Procedural Bridge No: 34-0006 L/RJoint fit-up Coating Other Component: PaintProcedural Procedural Description: Painting of faying surfaces of Diagonal box beams

Reference Description: Painting of faying surfaces of Diagonal box beams

Description of Non-Conformance:

The Contractor has blasted and painted diagonal box beams and cover plates of faying surfaces after blasting an anchor profile of 132 μ , 118 μ and 100 μ . The contractor continued coating the components after measuring the excessive profiles. Attached are the QC reports depicting the readings.

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"Blast cleaning shall leave surfaces with a dense, uniform, sharp angular anchor pattern of not less than 40 μ m nor more than 86 μ m as measured in conformance with the requirements in ASTM Designation: D 4417

Who discovered the problem: Caltrans Quality Assurance(QA), Mark Wright (reviewing QC reports)

Name of individual from Contractor notified: ABF Quality Control Manager, Steve Lawton

Time and method of notification: In person @ 1300 11/7/08

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: Verbal 11/7/08

QC Inspector's Name: Bill Oaks

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

Inspected By: Dautermann, Peter

SMR

Reviewed By: Dautermann, Peter

SMR

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1

Page 1 of 1

Report number 28-001-F.S

- Quadrate splice 56 pcs
- H splice 100pcs
- Cover plate 80 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

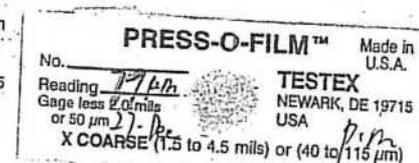
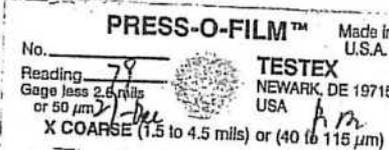
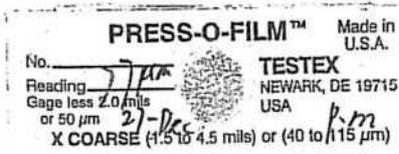
W J Oak

Surface Preparation

	Start	Complete	Accept	Reject					
Pressure Wash/Degrease	27/12/2008	27/12/2008	A						
Blasting external surfaces to SSPC 10			A						
Blasting internal surfaces to SSPC 10	27/12/2008	27/12/2008	A						
Feathering of Paint Edges (Repairs)			N/A						
Cleaning prior to Paint Application	27/12/2008	27/12/2008	A						
Residual Chlorides	27/12/2008	27/12/2008	A						
Date	27/12/2008								
Blast profile (µm)	1	2	3	4	5	6	Min	Max	Avg
	77	77	79				77	79	78

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles



ZPMC

AB/F

CalTrans

[Signature]
Jan. 12. 28

[Signature]

Date



Daily Coating Inspection Report

- Quadrate splice 56 pcs
- H splice 100pcs
- Cover plate 80 pcs

Date: 27/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 28-001-F.S

Paint Manufacturer/Product Details International Interzinc22 Inorganic Zinc Silicate	Thinner Type / % Added GTA 803 @ 5% JL3909PV
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Paint Application Details

Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Base Batch Code JF0963PV Project Batch Code 22-03										
Blast Profile	x				Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03										
Medium to SSPC 10															
77~79µm															
W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number							
	N/A	N/A						1	2	3	4	6			
								Quadrate splice	69	91	80	x			
								H splice	46	75	61	x			
		Cover plate	60	90	75	x									

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp	Air Temp.
21:30	16.7°C	-	10.0°C	64.7	14.4°C	16.7°C

Remark:

ZPMC

[Signature]
2008.12.28

AB/F Inspector

[Signature]

CalTrans

Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 1
Report number 28 - 003 -F.S
Date: 27/12/2008

DFT Gauge, Manufacturer & Model		Elcometer 456	
Serial No.		HA 0114	
Item Description:	- Quadrate splice 56 pcs		
	- H splice 100pcs		
	- Cover plate 80 pcs		

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Quadrate splice	A	87	77	75	239	75	80
	B	80	88	83	251	80	84
	C	78	69	71	218	69	73
	D	77	79	82	238	77	79
	E	89	80	91	260	80	87
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	80	

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Quadrate splice	A	76	78	90	244	76	81
	B	75	74	85	234	74	78
	C	76	83	72	231	72	77
	D	77	78	69	224	69	75
	E	88	85	79	252	79	84
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	79	

Ref Report No. PR-002 for Application Details

Ref Report No. PR-002 for Application Details

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
H splice	A	60	65	69	194	60	65
	B	46	58	57	161	46	54
	C	72	64	59	195	59	65
	D	63	67	68	198	63	66
	E	63	75	75	213	63	71
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	64	

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
H splice	A	58	59	64	181	58	60
	B	61	71	63	195	61	65
	C	49	56	62	167	49	56
	D	48	60	57	165	48	55
	E	60	49	55	164	49	55
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	58	

Ref Report No. PR-002 for Application Details

Ref Report No. PR-002 for Application Details

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Cover plate	A	75	71	68	214	68	71
	B	60	82	72	214	60	71
	C	71	79	75	225	71	75
	D	78	77	79	234	77	78
	E	80	63	69	212	63	71
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	73	

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Cover plate	A	69	89	69	227	69	75
	B	78	75	87	240	75	80
	C	74	74	82	230	74	77
	D	75	68	79	222	68	74
	E	79	73	90	242	73	81
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	77	

Ref Report No. PR-002 for Application Details

Ref Report No. PR-002 for Application Details

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Cover plate	A						
	B						
	C						
	D						
	E						
Approx M ²	Specified DFT				Item Average (μm)		

ITEM		SPOT READINGS					
Location	Area	1	2	3	Total	Min	Avg
Cover plate	A						
	B						
	C						
	D						
	E						
Approx M ²	Specified DFT				Item Average (μm)		

Ref Report No. PR-002 for Application Details

Ref Report No. PR-002 for Application Details

DFT Gauge Calibration Record					Item		Avg. DFT (μm)	
Plate Shim μm	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat			
						Quadrate splice	80	
						H splice	61	
						Cover plate	75	

Inspector's Signature: *[Signature]*

Date: 2008.12.28

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1
Page 1 of 1
Report number 27-001-F.S

- Quadrate splice 60 pcs
- H splice 56 pcs
- Cover plate 57 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

W J Oak

Surface Preparation

	Start	Complete	Accept	Reject
Pressure Wash/Degrease	26/12/2008	26/12/2008	A	
Blasting external surfaces to SSPC 10			A	
Blasting internal surfaces to SSPC 10	27/12/2008	27/12/2008	A	
Feathering of Paint Edges (Repairs)			N/A	
Cleaning prior to Paint Application	27/12/2008	27/12/2008	A	
Residual Chlorides	27/12/2008	27/12/2008	A	

Date 27/12/2008

Blast profile (µm)	1	2	3	4	5	6	Min	Max	Avg
		83	83	81				81	83

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles

No. Spt 1
 Reading 83 µm
 Gage less 2.0 mils
 or 50 µm
 X COARSE (1.5 to 4.5 mils) or (40 to 115 µm)

No. Spt 2
 Reading 87 µm
 Gage less 2.0 mils
 or 50 µm
 X COARSE (1.5 to 4.5 mils) or (40 to 115 µm)

No. Spt 3
 Reading 82 µm
 Gage less 2.0 mils
 or 50 µm
 X COARSE (1.5 to 4.5 mils) or (40 to 115 µm)

ZPMC

AB/F

CalTrans

Date

[Handwritten signature]
2008.12.27

[Handwritten signature]
W J Oak



Daily Coating Inspection Report

- Quadrate splice 60 pcs
- H splice 56 pcs
- Cover plate 57 pcs

Date: 27/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 27-001-F.S

Paint Manufacturer/Product Details
International Interzinc22
Inorganic Zinc Silicate

Thinner Type / % Added
GTA 803 @ 5%
JL3909PV

Paint Application Details

Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Base Batch Code JF0963PV Project Batch Code 22-03						
Blast Profile	x				Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03						
Medium to SSPC 10											
81~83µm											
W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number			
	N/A	N/A		Quadrate splice	64	91	79	x			
				H splice	57	87	71	x			
				Cover plate	74	90	83	x			

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp.	Air Temp.
10:00	10.0°C	-	6.6°C	79.4	9.7°C	10.0°C

Remark:

ZPMC

AB/F Inspector

CalTrans

[Handwritten signature]
2008.12.27

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Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 1
Report number 27- 003 -F.S
Date: 27/12/2008

DFT Gauge, Manufacturer & Model Elcometer 456

Serial No. HA 0114

Item Description: - Quadrate splice 60 pcs
- H splice 56 pcs
- Cover plate 57 pcs

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Quadrate splice	A	77	84	84	245	77	82	Quadrate splice	A	88	78	82	248	78	83
	B	78	82	74	234	74	78		B	87	76	89	252	76	84
	C	78	84	70	232	70	77		C	78	71	91	240	71	80
	D	79	84	67	230	67	77		D	84	64	69	217	64	72
	E	78	79	74	231	74	77		E	89	86	77	252	77	84
Approx M ² 2.5M ²	Specified DFT	25-125 μm			Item Average (μm)	78		Approx M ² 2.5M ²	Specified DFT	25-125 μm			Item Average (μm)	81	
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
H splice	A	69	68	61	198	61	66	H splice	A	65	69	80	214	65	71
	B	78	77	79	234	77	78		B	79	64	62	205	62	68
	C	77	58	74	209	58	70		C	68	68	57	193	57	64
	D	71	64	87	222	64	74		D	71	79	63	213	63	71
	E	62	78	83	223	62	74		E	71	81	70	222	70	74
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	72		Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	70	
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Cover plate	A	88	78	76	242	76	81	Cover plate	A	88	79	86	253	79	84
	B	86	77	79	242	77	81		B	85	84	88	257	84	86
	C	82	81	83	246	81	82		C	91	86	79	256	79	85
	D	88	87	82	257	82	86		D	90	78	89	257	78	86
	E	77	74	83	234	74	78		E	74	89	85	248	74	83
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	81		Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	85	
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
A								A							
B								B							
C								C							
D								D							
E								E							
Approx M ²	Specified DFT				Item Average (μm)			Approx M ²	Specified DFT				Item Average (μm)		
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

DFT Gauge Calibration Record						Item		Avg. DFT (μm)	
Plate Shim	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat				
						Quadrate splice		79	
						H splice		71	
						Cover plate		83	

Inspector's Signature: *[Signature]* Date: 2008.12.27

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1

Page 1 of 1

Report number 26-001-F.S

- Box beam 25 pcs
- Quadrate splice 124 pcs
- H splice 96 pcs
- Cover plate 48 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

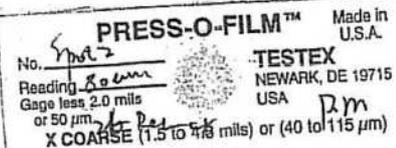
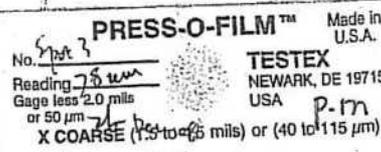
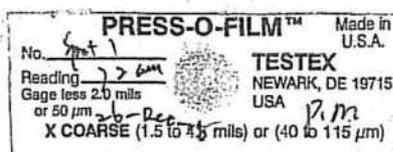
W J Oak

Surface Preparation

	Start	Complete	Accept	Reject					
Pressure Wash/Degrease	26/12/2008	26/12/2008	A						
Blasting external surfaces to SSPC 10			A						
Blasting internal surfaces to SSPC 10	26/12/2008	26/12/2008	A						
Feathering of Paint Edges (Repairs)			N/A						
Cleaning prior to Paint Application	26/12/2008	26/12/2008	A						
Residual Chlorides	26/12/2008	26/12/2008	A						
Date:	26/12/2008								
Blast profile (µm)	1	2	3	4	5	6	Min	Max	Avg
	72	80	78				72	80	77

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles



ZPMC *[Signature]*
2008.12.27

AB/F *[Signature]*

CalTrans

Date

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



Document No. PR - 002 Rev 0
Page 1 of 1
Report number 26-002-F.S

Daily Coating Inspection Report

- Box beam 25 pcs
- H splice 96 pcs
- Quadrate splice 124 pcs
- Cover plate 48 pcs

Date: 26/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 26-001-F.S

Paint Manufacturer/Product Details
International Interzinc22
Inorganic Zinc Silicate

Thinner Type / % Added
GTA 803 @ 5%
JL3909PV

Paint Application Details

Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Base Batch Code JF0963PV Project Batch Code 22-03								
Blast Profile	×				Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03								
Medium to SSPC 10													
72~80µm													
W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number					
	N/A	N/A						1	2	3	4	6	
				Box beam	64	92	74	×					
				Quadrate splice	54	81	67	×					
				H splice	66	92	79	×					
				Cover plate	49	78	63	×					

Comments:

The relative components code numbers are as follows:

Box beam		
FB006-039-001 002	FB006-081-001 002	FB006-124-003 004
FB006-039-003 004	FB006-081-003 004	FB006-125-001 002
FB006-046-001 002	FB006-082-001 002	FB006-125-003 004
FB006-046-003 004	FB006-082-003 004	FB006-128-001 002
FB006-057-003 004	FB006-083-001 002	FB006-128-003 004
FB006-079-001 002	FB006-083-003 004	FB006-129-001 002
FB006-079-003 004	FB006-119-001 002	FB006-129-003 004
FB006-080-001 002	FB006-119-003 004	Total: 25 pcs
FB006-080-003 004	FB006-124-001 002	

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp	Air Temp.
21:30	6.5°C	-	2.0°C	73.2	7.4°C	6.5°C

Remark:

ZPMC

Ma...
2008.12.27

AB/F Inspector
W. Oak

CalTrans

Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 1
Report number 26 - 003 -F.S
Date: 26/12/2008

DFT Gauge, Manufacturer & Model		Elcometer 456	
Serial No.		HA 0114	
Item Description:	- Box beam 25 pcs - Quadrate splice 124 pcs	- H splice 96 pcs - Cover plate 48 pcs	

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Box beam	A	77	76	79	232	76	77	
	B	81	84	83	248	81	83	
	C	65	69	71	205	65	68	
	D	75	77	79	231	75	77	
	E	82	84	92	258	82	86	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	78		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Box beam	A	66	68	69	203	66	68	
	B	64	65	68	197	64	66	
	C	76	73	72	221	72	74	
	D	77	78	69	224	69	75	
	E	68	65	69	202	65	67	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	70		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Quadrate splice	A	65	64	67	196	64	65	
	B	64	65	63	192	63	64	
	C	68	71	64	203	64	68	
	D	78	74	71	223	71	74	
	E	81	81	72	234	72	78	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	70		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Quadrate splice	A	60	61	69	190	60	63	
	B	54	58	57	169	54	56	
	C	62	65	60	187	60	62	
	D	64	66	68	198	64	66	
	E	73	75	73	221	73	74	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	64		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
H splice	A	76	68	67	211	67	70	
	B	68	79	75	222	68	74	
	C	74	82	81	237	74	79	
	D	78	77	81	236	77	79	
	E	83	75	84	242	75	81	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	77		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
H splice	A	78	78	66	222	66	74	
	B	82	69	86	237	69	79	
	C	87	85	73	245	73	82	
	D	89	78	92	259	78	86	
	E	90	86	89	265	86	88	
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	82		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Cover plate	A	78	77	62	217	62	72	
	B	49	73	65	187	49	62	
	C	62	67	64	193	62	64	
	D	64	65	69	198	64	66	
	E	51	78	58	187	51	62	
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	65		
Ref Report No.		PR-002 for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg.	
Cover plate	A	55	72	52	179	52	60	
	B	69	61	63	193	61	64	
	C	55	67	56	178	55	59	
	D	58	59	63	180	58	60	
	E	61	71	52	184	52	61	
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	61		
Ref Report No.		PR-002 for Application Details						

DFT Gauge Calibration Record					Item		Avg. DFT (µm)
Plate Shim µm	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat		
						Box beam	74
						Quadrate splice	67
						H splice	79
						Cover plate	63

Inspector's Signature:

[Handwritten Signature]

Date:

2008.12.27

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1

Page 1 of 1

Report number 25-001-F.S

- Box beam 24 pcs
- Quadrate splice 196 pcs
- Cover plate 124 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

W J Oak

Surface Preparation

	Start	Complete	Result	Accept	Reject
Pressure Wash/Degrease	25/12/2008	25/12/2008	-	A	
Blasting external surfaces to SSPC 10				A	
Blasting internal surfaces to SSPC 10	26/12/2008	26/12/2008	-	A	
Feathering of Paint Edges (Repairs)				N/A	
Cleaning prior to Paint Application	26/12/2008	26/12/2008	-	A	
Residual Chlorides	26/12/2008	26/12/2008	10us/cm	A	

Date 26/12/2008

Blast profile (µm)	1	2	3	4	5	6	Min	Max	Avg
	78	82	74						

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles

PRESS-O-FILM™ Made in U.S.A.
No. 74
Reading 74
Gage less 2.0 mills or 50 µm 26-Dec
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)
TESTEX NEWARK, DE 19715 USA *a.m*

PRESS-O-FILM™ Made in U.S.A.
No. 78
Reading 78
Gage less 2.0 mills or 50 µm 26-Dec
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)
TESTEX NEWARK, DE 19715 USA *a.m*

PRESS-O-FILM™ Made in U.S.A.
No. 92
Reading 92
Gage less 2.0 mills or 50 µm 26-Dec
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)
TESTEX NEWARK, DE 19715 USA *a.m*

ZPMC

AB/F

CalTrans

Date

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2008.12.27

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W J Oak

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



Document No. PR - 002 Rev 0
Page 1 of 1
Report number 25-002-F.S

Daily Coating Inspection Report

- Box beam 24 pcs
- Quadrate splice 196 pcs
- Cover plate 124 pcs

Date: 26/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 25-001-F.S

Paint Manufacturer/Product Details
International Interzinc22
Inorganic Zinc Silicate

Thinner Type / % Added
GTA 803 @ 5%
JL3909PV

Paint Application Details

Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Base Batch Code JF0963PV Project Batch Code 22-03								
Blast Profile	x				Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03								
Medium to SSPC 10													
74~82µm													
W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number					
	N/A	N/A						1	2	3	4	6	
								x					
								x					
				Box beam	64	92	80	x					
				Quadrate splice	55	88	74	x					
				Cover plate	49	81	65	x					

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- The relative components code numbers are as follows:

Box beam		
FB006-054-003 004	FB006-064-001 002	FB006-072-003 004
FB006-057-001 002	FB006-065-001 002	FB006-073-003 004
FB006-061-001 002	FB006-065-003 004	FB006-074-001 002
FB006-061-003 004	FB006-067-001 002	FB006-074-003 004
FB006-062-001 002	FB006-068-001 002	FB006-075-003 004
FB006-062-003 004	FB006-070-003 004	FB006-076-001 002
FB006-063-001 002	FB006-071-003 004	FB006-077-001 002
FB006-063-003 004	FB006-072-001 002	FB006-084-001 002
Total: 24 pcs		

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp.	Air Temp.
15:00	6.7°C		0.2°C	60.7	7.8°C	6.7°C

Remark:

ZPMC

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2008.12.27

AB/F Inspector

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CalTrans

Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 1
Report number 25-003 -F.S
Date: 26/12/2008

DFT Gauge, Manufacturer & Model		Elcometer 456	
Serial No.		HA 0114	
Item Description:	- Box beam 24 pcs - Quadrate splice 196 pcs - Cover plate 124 pcs		

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Box beam	A	87	84	85	256	84	85
	B	78	81	75	234	75	78
	C	77	84	69	230	69	77
	D	79	80	67	226	67	75
	E	72	79	74	225	72	75
Approx M ² 1.5M ²	Specified DFT	25-125 µm			Item Average (µm)	78	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Box beam	A	91	78	79	248	78	83
	B	87	75	89	251	75	84
	C	88	79	91	258	79	86
	D	84	64	76	224	64	75
	E	92	86	73	251	73	84
Approx M ² 1.5M ²	Specified DFT	25-125 µm			Item Average (µm)	82	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Quadrate splice	A	69	68	59	196	59	65
	B	78	78	79	235	78	78
	C	77	69	74	220	69	73
	D	71	84	88	243	71	81
	E	82	78	74	234	74	78
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	75	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Quadrate splice	A	66	69	79	214	66	71
	B	69	68	62	199	62	66
	C	78	68	79	225	68	75
	D	75	79	63	217	63	72
	E	71	81	80	232	71	77
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	72	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Quadrate splice	A	55	58	56	169	55	56
	B	66	67	69	202	66	67
	C	82	81	83	246	81	82
	D	88	87	82	257	82	86
	E	77	74	60	211	60	70
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	72	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Quadrate splice	A	88	79	86	253	79	84
	B	85	84	88	257	84	86
	C	92	91	79	262	79	87
	D	66	68	69	203	66	68
	E	64	59	58	181	58	60
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	77	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Cover plate	A	66	73	73	212	66	71
	B	49	65	64	178	49	59
	C	58	59	66	183	58	61
	D	65	78	69	212	65	71
	E	61	81	74	216	61	72
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	67	
Ref. Report No. PR-002 for Application Details							

ITEM							
Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg
Cover plate	A	56	58	69	183	56	61
	B	68	59	51	178	51	59
	C	59	64	72	195	59	65
	D	59	71	59	189	59	63
	E	54	74	65	193	54	64
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	63	
Ref. Report No. PR-002 for Application Details							

DFT Gauge Calibration Record					Item		Avg. DFT (µm)
Plate Shim	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat		
µm						Box beam	80
						Quadrate splice	74
						Cover plate	65

Inspector's Signature: *[Signature]*

Date: *2008.12.27*

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1
Page 1 of 1
Report number 24-001-F.S

- Diaphragm top part 4 pcs
- Box beam 26 pcs
- H splice 52 pcs
- Diaphragm bottom part 9 pcs
- Quadrate splice 104 pcs
- L splice 16 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

W J Oak

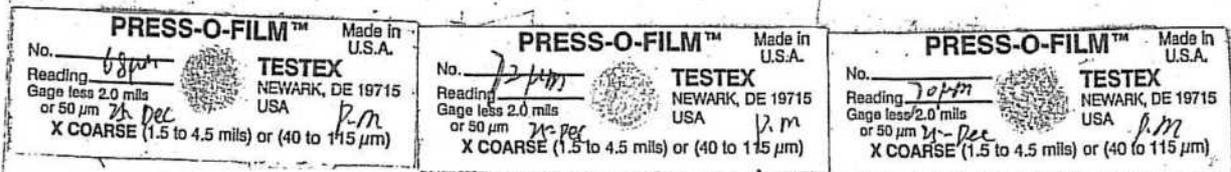
Surface Preparation

	Start	Complete	Accept	Reject
Pressure Wash/Degrease	24/12/2008	24/12/2008	A	
Blasting external surfaces to SSPC 10			A	
Blasting internal surfaces to SSPC 10	25/12/2008	25/12/2008	A	
Feathering of Paint Edges (Repairs)			N/A	
Cleaning prior to Paint Application	25/12/2008	25/12/2008	A	
Residual Chlorides	25/12/2008	25/12/2008	A	

Date	25/12/2008								
Blast profile (µm)	1	2	3	4	5	6	Min	Max	Avg
	68	72	70				68	72	70

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles



ZPMC

AB/F

CalTrans

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2008 12 26

[Signature]
W J Oak

Date

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge



Document No. PR - 002 Rev 0
Page 1 of 1
Report number 24-002-F.S

Daily Coating Inspection Report

- Diaphragm top part 4 pcs
- Box beam 26 pcs
- H splice 52 pcs
- Diaphragm bottom part 9 pcs
- Quadrate splice 104 pcs
- L splice 16 pcs

Date: 25/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 24-001-F.S

Paint Manufacturer/Product Details International Interzinc22 Inorganic Zinc Silicate	Thinner Type / % Added GTA 803 @ 5% JL3909PV
--	--

Paint Application Details					Paint Base Batch Code JF0963PV Project Batch Code 22-03				
Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03				
Blast Profile	×								
Medium to SSPC 10									
68~72µm									

W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number						
	N/A	N/A						1	2	3	4	6		
				Diaphragm top part	64	91	78	×						
				Diaphragm bottom part	57	81	67	×						
				Box beam	66	94	80	×						
				Quadrate splice	47	90	64	×						
				H splice	68	91	80	×						
				L splice	64	77	69	×						

Comments:

The relative components code numbers are as follows:

Box beam		Diaphragm bottom part	Diaphragm top part
FB006-064-003 004	FB006-121-001 002	FB043-001	FB003-047
FB006-068-003 004	FB006-121-003 004	FB063-001	FB005-010
FB006-070-001 002	FB006-122-001 002	FB063-002	FB013-015
FB006-071-001 002	FB006-122-003 004	FB064-001	FB071-001
FB006-075-001 002	FB006-123-001 002	FB064-002	Total: 4 pcs
FB006-076-003 004	FB006-123-003 004	FB065-001	
FB006-077-003 004	FB006-126-001 002	FB067-001	
FB006-117-001 002	FB006-126-003 004	FB068-001	
FB006-117-003 004	FB006-127-001 002	FB072-001	
FB006-118-001 002	FB006-127-003 004	Total: 9 pcs	
FB006-118-003 004	FB006-037-001 002		
FB006-120-001 002	FB006-048-001 002		
FB006-120-003 004	FB006-048-003 004		
Total: 26 pcs			

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp.	Air Temp.
21:00	8.8°C	-	1.5°C	48.6	9.7°C	8.8°C

Remark:

ZPMC

Handwritten signature and date: 2008.12.26

AB/F Inspector

Handwritten signature

CalTrans

Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 2
Report number 24 - 003 -F.S
Date: 25/12/2008

DFT Gauge, Manufacturer & Model		Elcometer 456	
Serial No.	HA 0114		
Item Description:	- Diaphragm top part 4 pcs		- Diaphragm bottom part 9 pcs
	- Box beam 26 pcs		- Quadrate splice 104 pcs
	- H splice 52 pcs		- L splice 16 pcs

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
diaphragm top part	A	74	75	79	228	74	76	L splice	A	66	68	69	203	66	68
	B	81	82	83	246	81	82		B	64	65	68	197	64	66
	C	64	69	67	200	64	67		C	74	71	72	217	71	72
	D	75	78	79	232	75	77		D	77	71	69	217	69	72
	E	85	84	91	260	84	87		E	68	64	69	201	64	67
Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	78			Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	69		
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
diaphragm bottom part	A	66	64	68	198	64	66	diaphragm bottom part	A	60	61	68	189	60	63
	B	64	65	60	189	60	63		B	59	58	57	174	57	58
	C	68	69	64	201	64	67		C	59	64	60	183	59	61
	D	78	75	71	224	71	75		D	64	65	68	197	64	66
	E	80	81	72	233	72	78		E	73	75	77	225	73	75
Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	70			Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	65		
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Box beam	A	66	68	67	201	66	67	Box beam	A	88	78	76	242	76	81
	B	68	69	75	212	68	71		B	82	84	86	252	82	84
	C	84	82	80	246	80	82		C	87	81	83	251	81	84
	D	88	87	81	256	81	85		D	79	78	92	249	78	83
	E	73	75	74	222	73	74		E	94	86	89	269	86	90
Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	76			Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	84		
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Quadrate splice	A	66	76	72	214	66	71	Quadrate splice	A	49	62	52	163	49	54
	B	49	63	65	177	49	59		B	49	60	53	162	49	54
	C	52	67	64	183	52	61		C	55	57	56	168	55	56
	D	54	55	59	168	54	56		D	47	59	63	169	47	56
	E	49	78	58	185	49	62		E	61	65	52	178	52	59
Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	62			Approx M ² 2.0M ²	Specified DFT	25-125 μm		Item Average (μm)	56		
Ref Report No. PR-002 for Application Details								Ref Report No. PR-002 for Application Details							

DFT Gauge Calibration Record						Item		Avg. DFT (μm)
Plate Shim μm	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat	Diaphragm top part		78
						Diaphragm bottom part		67
						Box beam		80
						L splice		69

Inspector's Signature: *[Signature]* Date: 2008.12.26

Shanghai Zhenhua Port Machinery Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 2 of 2
Report number 24 - 003 -F.S
Date: 25/12/2008

DFT Gauge, Manufacturer & Model		Elcometer 456	
Serial No. HA 0114			
Item Description:	- Diaphragm top part 4 pcs		- Diaphragm bottom part 9 pcs
	- Box beam 26 pcs		- Quadrate splice 104 pcs
	- H splice 52 pcs		- L splice 16 pcs

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
Quadrate splice	A	72	88	61	221	61	74	
	B	82	84	90	256	82	85	
	C	66	81	65	212	65	71	
	D	72	79	69	220	69	73	
	E	84	73	80	237	73	79	
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	76		
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
Quadrate splice	A	58	66	61	185	58	62	
	B	65	58	64	187	58	62	
	C	67	55	77	199	55	66	
	D	69	59	67	195	59	65	
	E	72	59	59	190	59	63	
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	64		
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
H splice	A	78	87	74	239	74	80	
	B	76	82	69	227	69	76	
	C	78	69	79	226	69	75	
	D	79	77	68	224	68	75	
	E	82	79	72	233	72	78	
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	77		
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
H splice	A	69	84	77	230	69	77	
	B	89	88	89	266	88	89	
	C	78	79	91	248	78	83	
	D	73	83	90	246	73	82	
	E	82	86	89	257	82	86	
Approx M ² 2.0M ²	Specified DFT	25-125 μm			Item Average (μm)	88		
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
	A							
	B							
	C							
	D							
	E							
Approx M ² 2.0M ²	Specified DFT				Item Average (μm)			
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
	A							
	B							
	C							
	D							
	E							
Approx M ² 2.0M ²	Specified DFT				Item Average (μm)			
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
	A							
	B							
	C							
	D							
	E							
Approx M ² 1.5M ²	Specified DFT				Item Average (μm)			
Ref. Report No. PR-002		for Application Details						

ITEM		SPOT READINGS						
Location	Area	1	2	3	Total	Min	Avg	
	A							
	B							
	C							
	D							
	E							
Approx M ² 1.5M ²	Specified DFT				Item Average (μm)			
Ref. Report No. PR-002		for Application Details						

DFT Gauge Calibration Record					
Plate Shim	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat
μm					

Item	Avg. DFT (μm)
Quadrate splice	64
H splice	80

Inspector's Signature: *[Signature]*

Date: 2008.12.26



**Preliminary & Surface Preparation
Inspection Report**

Document No. PR - 001 Rev 1
Page 1 of 1
Report number 23-001-F.S

- Diaphragm bottom part 10 pcs
- Box beam 28 pcs
- Cover plate 105 pcs

Preliminary Inspection

Weld Spatter	A		Discontinuity in welds	A	Legend	
Sharp Edges	A		Handling Damage	A	Accept	A
Laminations	A		Abrasive free of contamination	A	Reject	R
Undercut	A		Air free of oil & moisture	A		
Bolting	N/A		Substrate free of oil & grease	A		

Rectification required prior to Surface Preparation

None Required

Authority to Proceed with Surface Preparation

Yes

W J Oak

Surface Preparation

	Start	Complete	Accept	Reject
Pressure Wash/Degrease	24/12/2008	24/12/2008	A	
Blasting external surfaces to SSPC 10			A	
Blasting internal surfaces to SSPC 10	25/12/2008	25/12/2008	A	
Feathering of Paint Edges (Repairs)			N/A	
Cleaning prior to Paint Application	25/12/2008	25/12/2008	A	
Residual Chlorides	25/12/2008	25/12/2008	A	

Date	25/12/2008						Min	Max	Avg
Blast profile (µm)	1	2	3	4	5	6	66	76	71

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- Blast Profiles

PRESS-O-FILM™ Made in U.S.A.
No. 66
Reading 66 µm
Gage less 2.0 mills
or 50 µm 25-DEC
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)

TESTEX
NEWARK, DE 19715
USA
a.m.

PRESS-O-FILM™ Made in U.S.A.
No. 76
Reading 76 µm
Gage less 2.0 mills
or 50 µm 25-DEC
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)

TESTEX
NEWARK, DE 19715
USA
a.m.

PRESS-O-FILM™ Made in U.S.A.
No. 72
Reading 72 µm
Gage less 2.0 mills
or 50 µm 25-DEC
X COARSE (1.5 to 4.5 mills) or (40 to 115 µm)

TESTEX
NEWARK, DE 19715
USA
a.m.

ZPMC

AB/F

CalTrans

Date

[Signature]
2008.12.26

[Signature]



Daily Coating Inspection Report

- Diaphragm bottom part 10 pcs
- Box beam 28 pcs
- Cover plate 105 pcs

Date: 25/12/2008

Surface Preparation carried out in compliance with SSPC 10 refer to PR - 001 NO. 23-001-F.S

Paint Manufacturer/Product Details
International Interzinc22
Inorganic Zinc Silicate

Thinner Type / % Added
GTA 803 @ 5%
JL3909PV

Paint Application Details

Method of Application	Air Spray	Brush	Airless Spray	Roller	Paint Base Batch Code JF0963PV Project Batch Code 22-03								
Blast Profile	x				Paint Curing Agent Batch Code JM4584PV Project Batch Code 22-03								
Medium to SSPC 10													
66~76µm													
W.F.T	Min / Max		D.F.T	Item	Min	Max	Avg.	Coat Number					
	N/A	N/A						1	2	3	4	6	
	Diaphragm bottom part	54						90	72	x			
				Box beam	45	88	67	x					
				Quadrate splice	46	92	66	x					

Comments:

- It's the re-blasting to all the components as the requirement of CalTrans.
- The relative components code numbers are as follows:

Box beam			Diaphragm bottom part
FB006-107-001 002	FB006-112-001 002	FB006-060-001 002	FB003-041
FB006-107-003 004	FB006-112-003 004	FB006-060-003 004	FB003-046
FB006-108-001 002	FB006-113-001 002	FB006-066-001 002	FB003-057
FB006-108-003 004	FB006-113-003 004	FB006-066-003 004	FB004-011
FB006-109-001 002	FB006-114-001 002	FB006-069-001 002	FB004-015
FB006-109-003 004	FB006-114-003 004	FB006-069-003 004	FB005-011
FB006-110-001 002	FB006-115-001 002	FB006-078-001 002	FB005-016
FB006-110-003 004	FB006-115-003 004	FB006-078-003 004	FB013-016
FB006-111-001 002	FB006-116-001 002		FB014-011
FB006-111-003 004	FB006-116-003 004		FB014-017
Total: 28 pcs			Total: 10 pcs

Ambient Conditions During Application

Time	Dry Bulb	Wet Bulb	Dew Point	RH %	Steel Temp.	Air Temp.
10:35	6.8°C		0.4°C	63.0	6.2°C	6.8°C

Remark:

ZPMC

AB/F Inspector

CalTrans

[Signature] 2008.12.16

[Signature]

Shanghai Zhenhua Port Machinery
Co., Ltd.
San Francisco-Oakland Bay Bridge
Paint Dry Film Thickness Report



Document No. PR - 003 Rev 1
Page 1 of 1
Report number 23- 003 -F.S
Date: 25/12/2008

DFT Gauge, Manufacturer & Model Elcometer 456

Serial No. HA 0114

Item Description:
- Diaphragm bottom part 10 pcs
- Box beam 28 pcs
- Cover plate 105 pcs

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
diaphragm bottom part	A	82	89	65	236	65	79	diaphragm bottom part	A	67	62	59	188	59	63
	B	81	80	90	251	80	84		B	62	65	69	196	62	65
	C	64	82	66	212	64	71		C	74	78	59	211	59	70
	D	70	72	68	210	68	70		D	56	54	59	169	54	56
	E	81	77	79	237	77	79		E	90	85	83	258	83	86
Approx M ² 1.5M ²	Specified DFT	25-125 µm			Item Average (µm)	76		Approx M ² 1.5M ²	Specified DFT	25-125 µm			Item Average (µm)	68	

Ref. Report No. PR-002 for Application Details

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Box beam	A	63	62	60	185	60	62	Box beam	A	65	68	69	202	65	67
	B	74	71	75	220	71	73		B	45	49	52	146	45	49
	C	60	59	57	176	57	59		C	55	54	58	167	54	56
	D	88	82	84	254	82	85		D	57	55	53	165	53	55
	E	80	79	76	235	76	78		E	80	82	86	248	80	83
Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	71		Approx M ² 2.0M ²	Specified DFT	25-125 µm			Item Average (µm)	62	

Ref. Report No. PR-002 for Application Details

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Cover plate	A	55	58	56	169	55	56	Cover plate	A	88	79	86	253	79	84
	B	66	67	69	202	66	67		B	85	84	88	257	84	86
	C	82	81	83	246	81	82		C	92	91	79	262	79	87
	D	88	87	82	257	82	86		D	66	68	69	203	66	68
	E	77	74	60	211	60	70		E	64	59	58	181	58	60
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	72		Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	77	

Ref. Report No. PR-002 for Application Details

ITEM								ITEM							
Location	Area	SPOT READINGS						Location	Area	SPOT READINGS					
		1	2	3	Total	Min	Avg			1	2	3	Total	Min	Avg
Cover plate	A	75	74	72	221	72	74	Cover plate	A	55	54	59	168	54	56
	B	49	63	52	164	49	55		B	58	59	61	178	58	59
	C	49	68	60	177	49	59		C	49	52	58	159	49	53
	D	55	55	56	166	55	55		D	48	49	60	157	48	52
	E	49	46	52	147	46	49		E	61	64	59	184	59	61
Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	58		Approx M ² 2.5M ²	Specified DFT	25-125 µm			Item Average (µm)	56	

Ref. Report No. PR-002 for Application Details

DFT Gauge Calibration Record						Item		Avg. DFT (µm)
Plate Shim	BMR	Adjust	Spec Avg DFT	DFT Primer Coat	DFT Final Coat			
µm						diaphragm bottom part		72
						Box beam		67
						Cover plate		66

Inspector's Signature:

[Signature]

Date:

2008. 12. 26

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-000188**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 13-Feb-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0189**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006 L/R
Joint fit-up	Coating	Other	Component:
Procedural	Procedural	Description:	

Date the Non-Conformance Report was written: 07-Nov-2008**Description of Non-Conformance:**

The Contractor has blasted and painted diagonal box beams and cover plates of faying surfaces after blasting an anchor profile of 132 μ , 118 μ and 100 μ . The contractor continued coating the components after measuring the excessive profiles. Attached are the QC reports depicting the readings.

Contractor's proposal to correct the problem:

ZPMC re-blasted the surface to comply with the acceptable blast profiles.

Corrective action taken:

ZPMC re-blasted the surface to comply with the acceptable blast profiles. The documentation of the acceptable blast profile was submitted in NPR 186R1.

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 Eric Tsang, +(86) 150.0042.2372, who represents the Office of Structural Materials for your project.

Inspected By: Tsang, Eric

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer