

**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-000486  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV **Date:** 19-Oct-2009  
**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0459

**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 9CW Deck Panel and Floorbeam
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Fabrication of Segment 9CW not according to the approved fabrication procedure

**Description of Non-Conformance:**

This Quality Assurance (QA) Inspector observed that the contractor welded the deck panel diaphragm to the floor beam top flange by utilizing 51 tons external weight in achieving an acceptable joint fit-up for welding. These additional weights were placed across the exterior surface of the deck panel which helped in the closing the root gap opening for the joint. This incident occurred in Segment 9CW welds SSD13-PP79-004, SSD14-PP77-005 at PP77, 78, and 79 in Bay 14. According to the approved as noted fabrication procedure, the use of additional weight to position the deck panel fit up is not indicated as an acceptable procedure.



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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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### Applicable reference:

“BG103: Typical Box Girder Fabrication Procedure:” Step 10.1- Lift intermediate deck panel A1-1 onto the box girder. Then use adjustable device (i.e. jack) to adjust the position. Then theodolite will be used to check the transverse and longitudinal ACLs of deck plate according to the staff gauge. Tack weld and fix the position.

AWS D1.5 2002 section 3.3.1; “The parts to be joined by fillet welds shall be brought into as close contact as practicable. The root opening shall not exceed 5 mm”.

**Who discovered the problem:** Chandra Kumar Sudulaimuthu

**Name of individual from Contractor notified:** Steve Lawton

**Time and method of notification:** 1000 hours, Verbal

**Name of Caltrans Engineer notified:** Ching Chao

**Time and method of notification:** 1200 hours, Email

**QC Inspector's Name:** Xu Tao

**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.

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<b>Inspected By:</b>	Carreon,Albert	Lead Reviewer/Task Leader
<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**

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

**Date:** 02-Dec-2009

**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:** 05.03.06-000449

**Subject:** NCR No. ZPMC-0459

**Reference Description:** Fabrication of Segment 9CW not according to the approved fabrication procedure

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:** 09

**Remarks:**

This Quality Assurance (QA) Inspector observed that the contractor welded the deck panel diaphragm to the floor beam top flange by utilizing 51 tons external weight in achieving an acceptable joint fit-up for welding. These additional weights were placed across the exterior surface of the deck panel which helped in the closing the root gap opening for the joint. This incident occurred in Segment 9CW welds SSD13-PP79-004, SSD14-PP77-005 at PP77, 78, and 79 in Bay 14. According to the approved as noted fabrication procedure, the use of additional weight to position the deck panel fit up is not indicated as an acceptable procedure.

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

Submit a repair plan to the engineer for approval.

**Transmitted by:** Bill Howe

**Attachments:** ZPMC-0459

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, 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:** 05.03.06-000449

**Subject:** NCR No. ZPMC-0459

**Dated:** 11-Jan-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000478 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** The NCT requires a submittal of a repair plan for engineers approval, as no repair was performed there was no requirement for such a plan.

The NCT requires a submittal of a repair plan for engineers approval, as no repair was performed there was no requirement for such a plan. Weights have always been used for fit-up of these deck panels. ZPMC requests closure of this NCR.

**Submitted by:** Lawton, Steve

**Attachment(s):** ABF-NPR-000478R00

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### Caltrans' comments:

**Status:** CLO

**Date:** 12-Jan-2010

This NCR is withdrawn.

**Submitted by:** Howe, Bill

**Date:** 12-Jan-2010

**Attachment(s):**

**DEPARTMENT OF TRANSPORTATION**

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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-000518**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 11-Feb-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0459**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>Description:</b>	

**Date the Non-Conformance Report was written:** 19-Oct-2009**Description of Non-Conformance:**

This Quality Assurance (QA) Inspector observed that the contractor welded the deck panel diaphragm to the floor beam top flange by utilizing 51 tons external weight in achieving an acceptable joint fit-up for welding. These additional weights were placed across the exterior surface of the deck panel which helped in the closing the root gap opening for the joint. This incident occurred in Segment 9CW welds SSD13-PP79-004, SSD14-PP77-005 at PP77, 78, and 79 in Bay 14. According to the approved as noted fabrication procedure, the use of additional weight to position the deck panel fit up is not indicated as an acceptable procedure.

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

N/A

**Corrective action taken:**

NCR has been closed in light of the fact that weights have been used continuously throughout the assembly phase of construction. Thus far, no limit has been set on the amount of weight to be used during this phase. NDT and repair efforts will continue throughout Trial Assembly.

**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