

**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-000225**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 04-Jan-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0200**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> ESD1-Lift 1
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> Skin E, Longitudinal Stiffener E3 - 33m diaphragm	

**Reference Description:** Incomplete fit lug weld terminations**Description of Non-Conformance:**

It was observed by QA that welds had been improperly terminated at the end of Partial Joint Penetration (PJP) weld joints. ZPMC weld personnel failed to ensure that weld metal was completely deposited in a manner that would ensure a sound weld.

**Applicable reference:**

AWS D1.5 / 2002, Section 3.12.1, "Welds shall be terminated at the end of a joint in a manner that will ensure sound welds. Whenever possible, this shall be done by use of weld tabs (extension bars and runoff plates) placed in a manner that will duplicate the joint detail being welded."

**Who discovered the problem:** William Clifford**Name of individual from Contractor notified:** Don Walton**Time and method of notification:** 01-04-09, 10:30, Verbal**Name of Caltrans Engineer notified:** Scott Kennedy**Time and method of notification:** 01-05-09, 9:30, Verbal

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**QC Inspector's Name:** Fu Guo Gang

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

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

**Comments:**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh,(818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Sinevod,Serge	ASMR
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<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: 510-808-4618 Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

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

**Date:** 14-Jan-2009

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

**Dear:** Mr. Charles Kanapicki  
**Attention:** Mr. Dave Williams Consultant  
**Subject:** NCR No. ZPMC-0200

**Job Name:** SAS Superstructure  
**Document No:** 05.03.06-000194

**Reference Description:** Incomplete fit lug weld terminations

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

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

**Material Location:** Tower **Lift:** 01

**Remarks:**

It was observed by QA that welds had been improperly terminated at the end of Partial Joint Penetration (PJP) weld joints. ZPMC weld personnel failed to ensure that weld metal was completely deposited in a manner that would ensure a sound weld. AWS D1.5 / 2002, Section 3.12.1, "Welds shall be terminated at the end of a joint in a manner that will ensure sound welds. Whenever possible, this shall be done by use of weld tabs (extension bars and runoff plates) placed in a manner that will duplicate the joint detail being welded."

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

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

**Transmitted by:** Ken Lee Transportation Engineer

**Attachments:** ZPMC-0200

**cc:** Rick Morrow, Gary Pursell, Mark Woods, Doug Coe

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000194

**Subject:** NCR No. ZPMC-0200

**Dated:** 19-Feb-2009

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000197 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** Purposed resolution to NCR ZPMC-0200

The weld termination is not acceptable, however, extension bars and run-off plates are not possible to be used in this case. As the picture shows, the weld in question is not complete, since the time of this NCR, the weld has been completed with no defects noted. As a preventative measure, ABF/CT have instituted a training program for both welders and grinders. This specific case of fit lug welding and grinding is one of the training subjects.

**Submitted by:**

**Attachment(s):** ABF-NPR-000197R00

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**Caltrans' comments:**

**Status:** CLO

**Date:** 15-Apr-2009

The proposed resolution is acceptable. The welds have been completed, and training has been provided regarding this issue. The Department concurs that Non-Conformance ZPMC-0200 is closed.

**Submitted by:** Wright, Doug

**Date:** 15-Apr-2009

**Attachment(s):**

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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, PRC**Report No:** NCS-000215**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0200**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:** 04-Jan-2009**Description of Non-Conformance:**

It was observed by QA that welds had been improperly terminated at the end of Partial Joint Penetration (PJP) weld joints in East Tower, Lift 1. ZPMC weld personnel failed to ensure that weld metal was completely deposited in a manner that would ensure a sound weld.

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

Perform weld repairs.

**Corrective action taken:**

All affected fit lug welds in East Tower, Lift 1 have been repaired and green tagged.

**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 134-8257-0045, who represents the Office of Structural Materials for your project.

**Inspected By:** Sinevod, Serge

Quality Assurance Inspector

**Reviewed By:** Wahbeh, Mazen

QA Reviewer