

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-000230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 23-Feb-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0205**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: South Shaft, Lift 1
Procedural	Procedural	Description: Skin A to 47.6m, 43m, 38m Diaphragm Fit Lugs	

Reference Description: South Shaft, Lift 1 PJP Fit Lug Improper Weld Terminations**Description of Non-Conformance:**

QA observed welds that had been improperly terminated at the end of Partial Joint Penetration (PJP) fit lug weld joints. ZPMC weld personnel failed to ensure that weld metal was 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:** 02-23-2009, 10:30, verbal**Name of Caltrans Engineer notified:** Ken Lee**Time and method of notification:** 02-25-2009, 7:30, e-mail

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

QC Inspector's Name:

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.

Inspected By:	Sinevod,Serge	ASMR
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Reviewed By:	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: 03-Mar-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 Manager - OBG

Document No: 05.03.06-000198

Subject: NCR No. ZPMC-0205

Reference Description: South Shaft, Lift 1 PJP Fit Lug Improper 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:

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

Action Required and/or Action Taken:

Please refer to the attached Non-Conformance Report for details.

Propose a solution for the identified non-conformance to prevent the future occurrences and provide the documentation of the corrective action taken.

Transmitted by: Ken Lee Transportation Engineer

Attachments: ZPMC-0205

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: 05.03.06-000198

Subject: NCR No. ZPMC-0205

Dated: 11-Mar-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000203 Rev: 00

Contractor's Proposed Resolution:

Reference Resolution: ABFJV has notified ZPMC of the incomplete weld terminations and has conducted documented training with ZPMC CWI and MT inspectors.

ABFJV has notified ZPMC of the incomplete weld terminations and has conducted documented training with ZPMC CWI and MT inspectors. This NCR was also presented during the training session for review. With the attached data, ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000203R00;

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-0205 is closed.

Submitted by: Wright, Doug

Date: 15-Apr-2009

Attachment(s):

Tool Box Training

Subject:

CWI and MT inspector training, CT NCR's ZPMC-0123,
ZPMC-0162, ZPMC -0145, ZPMC-0204, ZPMC-0205,
ZPMC-0206, ZPMC-0207

Date:

Mar. 10th. 2009

Conducted By:

Steve Lawton

Name	Title
Xu Xiangping	CWI
Zhang Zhong Wang/Nam	}
Gousser Luan Zhaoqiang & Jia Jia	
Li Zhijiang	
Wan Wenzhong	
Zhao Chen Sun	
Zhang Zhixun	
Li Jianhua	

Tool Box Training Agenda

Subject: CWI responsibilities

Reason for Training: Several NCR's relating to CWI responsibility, where it appears the CWI is not completely aware of all duties expected of a CWI

Reference: NCR's, ZPMC-0123, ZPMC-0145, ZPMC-0162, ZPMC-0202, ZPMC-0204, ZPMC-0205

1. **AWS D1.5-2002 Section 6 Responsibilities of QC Inspector**
 - a. 6.2 Inspection of Materials
 - b. 6.3 Inspection of WPS Qualification and Equipment
 - c. 6.4 Inspection of Welder, Welding Operator and Tack Welder Qualifications
 - d. 6.5 Inspection of Work and Records
2. **Time of Inspection**
 - a. Fit-up
 - b. inprocess
 - c. Final
3. **AWS D1.5-02 Section 3**
 - a. 3.2 Preparation of Base Material
 - b. 3.3 Assembly
 - c. 3.4 Control of Distortion and Shrinkage
 - d. 3.6 Weld Profiles
 - e. 3.7 Repairs

Tool Box Training Agenda

Subject: MT of welds

Reason for Training: Several CT NCR's relating to welds accepted by MT by ZPMC then later found to be unacceptable by CT QA inspection.

Reference: CT NCR's ZPMC-0203, ZPMC-0204, ZPMC-0034, ZPMC-0035, ZPMC-0077, ZPMC-0191, ZPMC-0192, ZPMC-0194,

1. **MT Techniques**
 - a. Equipment
 - b. Pie Gage
 - c. Powder

2. **Inspection Techniques**
 - a. Lighting
 - b. Position of body (distance of eyes to the weld surface)
 - c. Speed
 - d. Amount of Powder

3. **Inspection Criteria**
 - a. ZPMC Inspection procedures
 - b. Relevant Versus Non Relevant indications

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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-000217**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0205**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: 23-Feb-2009**Description of Non-Conformance:**

QA observed welds that had been improperly terminated at the end of Partial Joint Penetration (PJP) fit lug weld joints in South Tower, Lift 1. ZPMC weld personnel failed to ensure that weld metal was 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 South 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