

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:** Shanghai, China**Report No:** NCR-000040**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 03-Jan-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0039**Type of problem:**

Welding	Concrete	Other	
Welding	Curing	Procedural	Bridge No: 34-0006
Joint fit-up	Coating	Other	Component: OBG - Deck Mock-Up
Procedural	Procedural	Descriptor:	Visual Inspection

Reference Description:**Description of Non-Conformance:**

American Bridge / Fluor (ABF) and ZPMC Quality Control (QC) did not identify all of the visual defects during their inspection of the closed rib weld trials. The Contractor did not identify areas with overlap and areas where the size of the reinforcing fillet was not within 2- 5 mm as specified in the Special Provisions.

Applicable reference:

Section 10-1.59 'Steel Structures,' subsection 'Shop Welding,' subsection 'Welding of Closed Ribs to Box Shell Plate' of the Special Provisions, page 329: "Closed ribs shall conform to the following: ... 4. A uniform reinforcement fillet of between 2 mm and 5 mm shall be included ... 5. The exterior surface profile shall meet AWS D1.5, Section 6.26.1 ... A maximum of 0.25 mm undercut is permitted."

AWS D1.5, Section 6.26.1.2: "Thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal."

AWS D1.5, Section 6.26.1.4: "Weld profiles shall be in conformance with 3.6."

AWS D1.5, Section 3.6.5: "The welds shall be free from overlap."

Who discovered the problem: Scott Croff and Alfredo Acuna

Name of individual from Contractor notified:

Time and method of notification:

Name of Caltrans Engineer notified: Ady Velasco

Time and method of notification: 14:00, 10-Jan-08, Email

QC Inspector's Name: Steve Lawton

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

See correspondence between ABF and CT

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 Patrick Lowry, 916-227-5719, who represents the Office

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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of Structural Materials for your project.

Inspected By: Lowry,Patrick

SMR

Reviewed By: Lowry,Patrick

SMR

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Shanghai, China**Report No:** NCS-000030**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Feb-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0039**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: 03-Jan-2008**Description of Non-Conformance:**

American Bridge / Fluor (ABF) and ZPMC Quality Control (QC) did not identify all of the visual defects during their inspection of the closed rib weld trials. The Contractor did not identify areas with overlap and areas where the size of the reinforcing fillet was not within 2- 5 mm as specified in the Special Provisions.

Contractor's proposal to correct the problem:

Contractor agreed to the following Closed Rib Visual Inspection Criteria:

- Overlap to be inspected by method of checking if light passes through a square edge that is placed flat on the deck against the toe of the weld.
- Reinforcing fillet size to be checked using a bridge cam gauge placed on the closed rib.

Corrective action taken:

Per conversations with the Contractor (Gang Jiao) on 14-Feb-08, the Contractor acknowledged that overlap shall be included as a visual acceptance criterion for closed rib welds (confirmation email dated 14-Feb-08). The Contractor acknowledged that overlap and reinforcing fillet size shall be inspected based on agreed Closed Rib Visual Inspection Criteria.

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:**

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Inspected By: Liu, Chengwen

Quality Assurance Inspector

Reviewed By: Lowry, Patrick

QA Reviewer