

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000246**Date Inspected:** 01-Jul-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Closed Rib Forming Demonstration**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Robert Cuellar is present at the fabrication facility of Zhenhua Port Machinery Company (ZPMC), LTD for the purpose of monitoring activities relative to the subsequent fabrication of the SFOBB Self Anchored Suspension Bridge. Also present is Caltrans Structures Construction representative Stan Ku and Caltrans OSM representatives, Mr. Ady Velasco, and Mr. Alfredo Acuna. Only observations by QA Inspector Robert Cuellar are being recorded within this report as follows,

Item	Description	WBS	Dwg No.	Status
1	Closed Rib Demonstration Pneumatic Milling	N/A	N/A	N/A
	Closed Rib Demonstration-Closed Rib-Pneumatic Machine Milling of Hand Hole Edge			

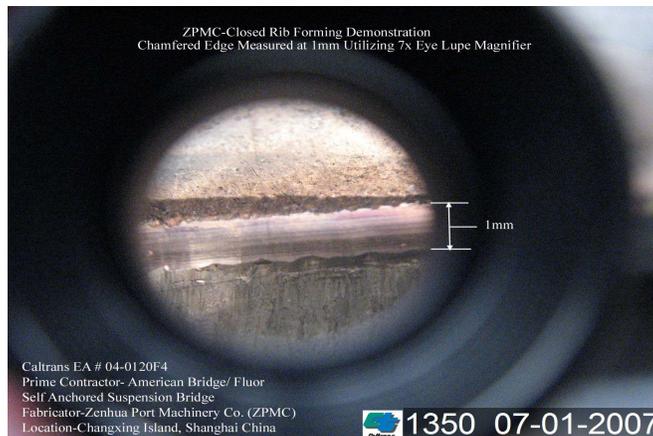
The Caltrans QA Inspector was present as requested by ABF and also ZPMC for the purpose of observing fabrication sequences prior to the closed rib forming demonstration. The Caltrans QA Inspector observed that there is a number of ZPMC representatives present along with ABF representative Mr. Danny McDonald. The Caltrans QA Inspector observed that the first step of the closed rib preparation is the chamfering of the hand hole for the bolt connection. A ZPMC worker was observed utilizing a pneumatic machine milling device for the purpose of chamfering the edge located at the hand hole of the closed rib number one (1). This chamfering of the hand hole edge and also the extreme end of the closed rib is required to be chamfered to a 2mm radius as described within the ZPMC fabrication figure 2.3.

At the completion of the machine milling operation the Caltrans QA Inspector questioned the ZPMC representatives and also the ABF representative as to how the chamfered edge was being measured to determine if the 2mm radius had been accomplished. After a period of time, ZPMC produced a stainless steel block that simulates a 1mm and also a 2mm radius. The Caltrans QA Inspector observed that the use of this ZPMC chamfering comparator is difficult to utilize as a comparator for the actual machine milled plate edge. The Caltrans QA Inspector utilized a 7x eye Lupe

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magnifier to measure the chamfered edge and identified that the chamfered edge was only 1mm. This measurement was confirmed by various representatives of ZPMC. The ABF representative did not participate in measuring of the chamfered edge utilizing the magnifier. Included below are digital pictures that support these observations.



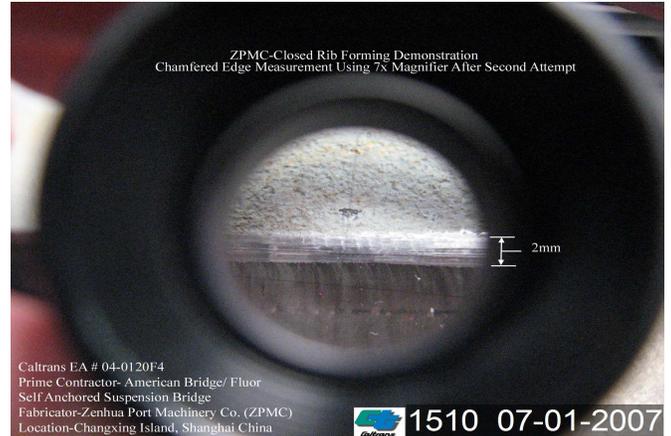
2 Closed Rib Demonstration-2nd Attempt for Pneumatic Milling N/A N/A

Closed Rib Demonstration-2nd Attempt Closed Rib-Pneumatic Machine Milling of Hand Hole Edge

The Caltrans QA Inspector observed that a ZPMC supervisor performed adjustments to the pneumatic machine milling device. At the completion of these adjustments the ZPMC supervisor performed plate edge chamfering on several scrap plate edges to measure his adjustments. After several plate chamfering attempts, the ZPMC supervisor was comfortable with the results and proceeded to perform the machine milling of the closed rib edge opposite the first attempt. At the conclusion of this machine milling, the Caltrans QA Inspector and several ZPMC representatives performed a measurement of the chamfered edge utilizing a 7x magnifying eye Lupe. The Caltrans QA Inspector and the ZPMC representatives confirmed a 2mm chamfer with the new machine milling adjustments. The initial machine milling performed at the hand hole for the bolt connection area was also remilled with the new adjustments. This subsequent machine milling also was measured with the 7x magnifier and observed as having a 2mm radius. The following digital pictures support these observations.

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|---|---|-----|-----|-----|
| 3 | Relocating of Closed Rib Plate
Closed Rib Forming Demonstration-Relocating of Closed Rib Plate to Plate Edge Milling Machine | N/A | N/A | N/A |
|---|---|-----|-----|-----|

The Caltrans QA Inspector observed that ZPMC is utilizing a magnetic lifting device for the relocating of the first closed rib scheduled for use of the closed rib demonstration forming operation. Included below is a digital picture of this observation.

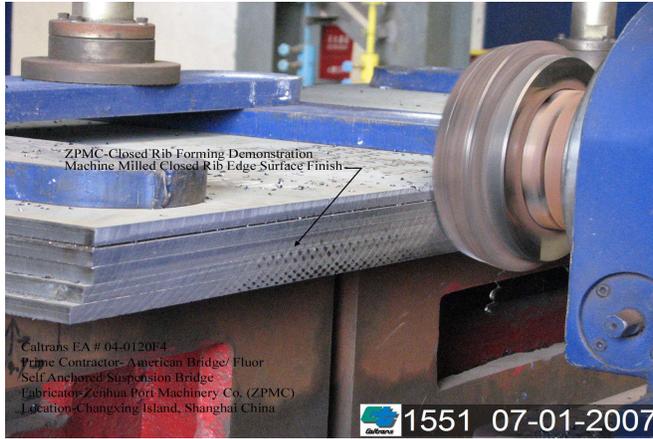


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|---|--|-----|-----|-----|
| 4 | Closed Rib-Longitudinal Plate Milling Machine
Closed Rib Forming Demonstration-Closed Rib Longitudinal Plate Edge Milling Machine | N/A | N/A | N/A |
|---|--|-----|-----|-----|

After approximately 2 hours the Caltrans QA Inspector observed the second step of ZPMC's closed rib forming demonstration. This step was observed as the relocating of five closed rib plates that have been stacked in position for milling of the longitudinal closed rib edges. The five closed rib plates are held in position utilizing hydraulic presses and also plate softeners that separate the hydraulic press heads from the stacked closed ribs. The Caltrans QA Inspector observed the machine milling of the five stacked closed rib plates. There are two (2) milling heads that run simultaneously and parallel on a track along the closed rib longitudinal edges. ZPMC advised that this milling operation of the closed rib longitudinal plate edges will consume approximately two (2) hours. This operation was not completed during the Caltrans QA Inspectors presence. Included below are digital pictures that support this observation.

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Summary of Conversations:

1) As identified within the contents of this report. 2) ZPMC representative Mr. Eric Xu Jun advised the Caltrans QA Inspector that ZPMC would resume the closed rib preparations for the closed rib forming demonstration on Monday July 02, 2007.

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: Cuellar,Robert

Quality Assurance Inspector

Reviewed By: McClary,David

QA Reviewer