DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000259
Date Inspected: 29-Jun-2007

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1000
OSM Departure Time: 1600
Location: Shanghai, China

CWI Name:	Lu Jian Hua	**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: Electrode Containers & Tower Base Template

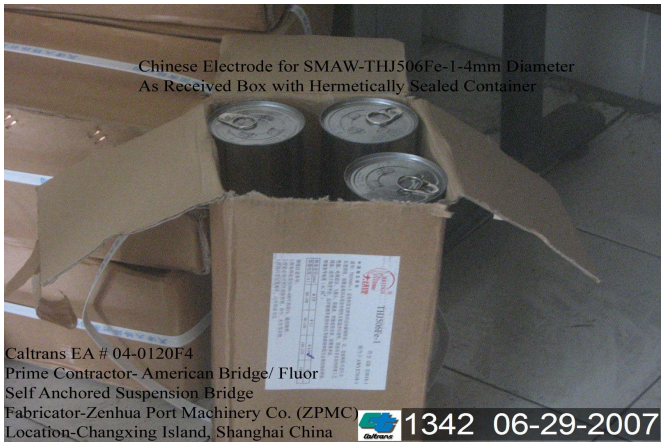
Summary of Items Observed:

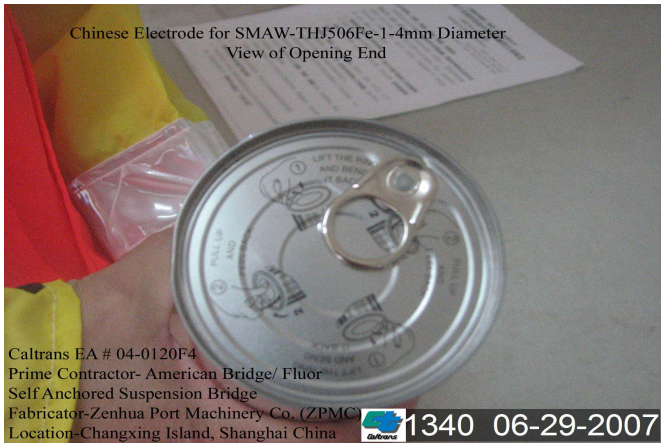
Caltrans Quality Assurance (QA) Inspector Robert Cuellar is present at the fabrication facility of Zenhua Port Machinery Company (ZPMC)., LTD for the purpose of monitoring activities relative to the subsequent fabrication of the SFOBB Self Anchored Suspension Bridge. Also present is Caltrans Structures Construction representative Stan Ku and Caltrans OSM representatives, Mr. Ady Velasco, Mr. Bruce Berger 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	Morning Commute Delays	N/A	N/A	N/A
	Morning Commute- The Caltrans QA representatives encountered extreme delays on this date due to heavy morning showers and dead locked traffic at the port terminal where shipping container vehicles did not allow passage for a significant period. The Caltrans QA representatives consumed three (3) hours total time commencing from the departure time from the residence location until the actual arrival time at the ZPMC facility.			
2	Observation of SMAW Containers	N/A	N/A	N/A
	Observation of Chinese Electrode Containers for THJ506Fe-1- 4mm Diameter			

Caltrans representatives, Mr. Stan Ku, Mr. Ady Velasco and the Caltrans QA Inspector were escorted by ZPMC representatives, Mr. Lu Jian and Welding Engineer Mr. Zhou Rui Kang for the purpose of observing as received Chinese brand 7018 electrodes identified as THJ506Fe-1. The Caltrans QA Inspector observed that the presented electrodes are contained within a cardboard box that holds the metal cylindrical containers for the electrodes. The information on the cardboard box and also the metal cylindrical container has identification information that is written in Chinese characters and also some English characters. The Caltrans QA Inspector identified that the cardboard box and also the metal container have identification as THJ506Fe-1 and AWS E7018. There did not appear to be any

evidence in English characters identifying the low hydrogen designation. Observation of the shielded metal arc electrodes within the metal container identified that the identification on the electrodes is difficult to read and also do not include a low hydrogen designation, H value. The metal cylindrical electrode containers appeared to be hermetically sealed. Review of the Chinese electrode manufacturers supporting documents for the presented electrodes was not completed by the Caltrans QA Inspector at the time of this observation. Included below are digital pictures of these observations.

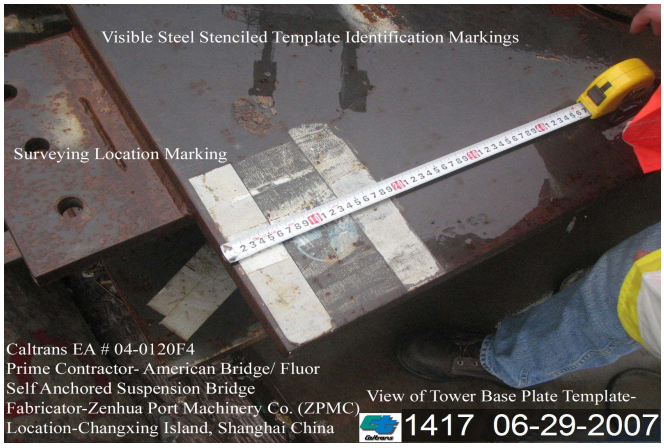




3 Tower Base Plate Template N/A N/A N/A

Tower Base Plate Template

Caltrans representative Mr. Stan Ku and the Caltrans QA Inspector are escorted by ZPMC representative Mr. Lu Jian Hua for the purpose of observing the storage area for the tower base plate template. The Caltrans QA Inspector observed that the tower base plate template that was fabricated in the USA is protected from the elements with tarps. Visual observation of the template is limited based on actual storage conditions. The Caltrans QA Inspector was able to observe some areas of the perimeter of the template. The Caltrans QA Inspector observed surveying identification markings as well as steel stenciled identification marking for assembly that were applied by Kiewit Offshore Services in the USA. Based on visual observations the template does not appear to contain significant rust that is resulting in the steel template to have pitting or cross sectional loss that may impact the intended use of the steel template. Included below are digital pictures of observations of the stored tower base plate template.



4	End Of Shift Commute	N/A	N/A	N/A

End Of Shift Commute- The Caltrans QA representatives encountered extreme delays returning from the ZPMC fabrication facility on Changxing Island back to the residence in Pudong China. The Caltrans QA representatives had to utilize private independent Chinese transportation services as well as public bus services to return to Pudong China on this date due to dead locked traffic at the port terminal where shipping container vehicles did not allow passage for other transportation vehicles. Transportation fees had to be negotiated with a private independent Chinese shuttle van due to limited vehicles at the ferry port area.

Summary of Conversations:

The Caltrans QA Inspector was present for the daily morning meeting between ZPMC, ABF and Caltrans on-site representatives. This meeting serves for the purpose of addressing scheduled activities for each date.
Representatives present included Mr.Lu Jian Hua, Mr.Huang Wei, and Mr. Hu Gang of ZPMC, Mr. Nate Lindell and Mr. Dave Williams of ABF and Mr. Ady Velasco, Mr. Stan Ku and the QA Inspector of Caltrans.
A manual record of the items listed below is being maintained on-site by Caltrans OSM.
Items Recorded

1) Mr. Nate Lindell elaborated on the status of PQR identified as HP2007147. ZPMC advised that they desired to proceed with the qualification of PQRs HP2007 and HP2007. ZPMC added that the electrodes for these two PQRs should arrive today for Caltrans review.

2) ZPMC voiced that they would like to start material verification for the closed rib forming demonstration. ZPMC added that they would like to start cutting the steel plates for the rib forming demonstration on Saturday June 30, 2007 and also that they would like the rib forming demonstration on Sunday July 1, 2007. Mr. Dave Williams voiced to ZPMC as to whether or not if it was possible for ZPMC to have the closed rib steel plates cut on Monday July 2, 2007 and closed rib forming on Tuesday July 3, 2007 due to such short notice. Caltrans Mr. Ady Velasco voiced that Caltrans could accommodate ZPMCs request but in the future would prefer notification in order to prepare for such events.

3) Mr. Nate Lindell elaborated on the Sulphur requirements for the OBG segments as required by the Special Provisions. Mr. Nate Lindell questioned as to whether or not the sulphur requirements applied to all OBG components or just the deck segments. Mr. Ady Velasco voiced that he would review the Special Provisions and respond later to Mr. Nate Lindell.

4) Mr. Ady Velasco questioned as to what the status of the closed rib 10 meter ABF trials is. Mr. Dave Williams voiced that what ABF on-site has observed may not necessarily reflect what is being stated by ABF in the USA. Mr. Dave Williams voiced that ABF on-site has observed closed rib partial joint penetration groove weld trial welding and that the samples reflect good penetration and also have good flatness on the panel after welding.

5) Mr. Ady Velasco questioned if ZPMC was having trouble with steel failing charpy tests. Mr. Nate Lindell responded that he is not aware of any steel failing charpy tests, however, what is happening is that ZPMC is receiving steel plates that have not been charpy tested as required. Mr. Nate Lindell added that ZPMC wants to schedule charpy testing of steel at either of the two testing facilities selected by Caltrans in Shanghai, China.

6) Mr. Lu Jian Hua voiced that ZPMCs schedule going forward would be that ZPMC will be working seven (7) days a week for a while. Mr. Dave Williams and Mr. Nate Lindell asked Mr. Lu Jian Hua if it was possible to provide a two (2) week look ahead schedule that would be provided on-going. Mr. Lu Jin Hua voiced that he would work on this with a person identified as Jin.

7) Mr. Lu Jian Hua voiced if ABF could review the Lincoln Outershield T55 H for the joining of HPS485W steel to grade 345 steel plate. Mr. Lu Jian Hua voiced that ZPMC was desiring to proceed with the PQR test.

8) Mr. Lu Jian Hua voiced that ZPMC would like to mechanically straighten tower mock-up steel plate prior to fabrication and added if this would be ok. Mr. Ady Velasco of Caltrans questioned if this straightening method was documented as a step within the ZPMC fabrication plan for the tower mock-up. Mr. Lu Jian responded that mechanical straightening was listed within the ZPMC fabrication plan for the tower.

9) Mr. Lu Jian Hua voiced that ZPMC would start to cut tower mock-up steel plate on Monday July 2, 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