

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-001210**Date Inspected:** 08-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**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:** OBG and Tower Mock-up**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
1 Root Gaps Floor Beam			
The QA inspector observed that ZPMC was not marking the root gap opening that exceeded 2 mm on ZPMC's fit-up verifications prior to welding. The QA inspector questioned ABF representative David LaRue if ZPMC has a system in place to inform welders, QC and QA personnel before and after the welding is completed with the actual weld size required (adding the actual gap of the joint). After Mr. David LaRue had a conversation with ZPMC representatives, Mr. David LaRue informed that from today ZPMC would start marking the actual weld size required of the joint on the steel so the welders and inspection personnel is aware of the changes on the weld size.			
2 Floor beam welding			
The QA inspector observed welder Yuan Wensong and Hong Shuili performing welding operations with the flux cored arc welding (FCAW) process, fillet weld, on the horizontal(2F) position at the junction of the floor beam web to the stiffeners weld joints # FB-002-02-002.			
The QA inspector performed random verifications of the welding parameters. The QA inspector found that welding parameters appeared to be in compliance with the contract documents.			
3 UT PJP re-evaluation of areas no identified by ZPMC U-ribs OBG Deck Mock-up.			
The QA inspector had a conversation with ABF representative Warren Buehler and ZPMC representatives Li Li Ming and Shen Xue Jun. The QA inspector informed to ABF and ZPMC representatives that on the OBG Deck Mock-up			

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partial penetration joints (PJP) were areas with lack of penetration (LOP) which ZPMC did not identify. The QA requested ZPMC and ABF to re-examine those locations. ZPMC and ABF agreed, and scheduled it for the next day.

4 Heat Straightening HSR1-156

The QA inspector observed ZPMC performing heat straightening operations at the bottom plate BP-1- plate 33A. ZPMC informed that the distortion after welding was not greater than 6 in 1000. The QA inspector performed random verifications of ZPMC heat straightening operations. The QA inspector found that ZPMC's heat straightening operations appeared to be in compliance with the contract documents.

5 Tower Mock-up 89 and 77 M

Tower Mock-up 89 M

The QA inspector observed ZPMC welders Shon Yong and Li Sheng Xu performing welding operations with the shielded metal arc welding (SMAW) in the horizontal 2G position at the junction of the skin plate A and the plate 842 (web plate).

Tower Mock-up 77

The QA inspector observed ZPMC welders Fu Yangjie performing welding operations with the shielded metal arc welding (SMAW) in the vertical 3G position at the junction of the plate lug and the diaphragm plate SA-104.

The QA inspector performed random verifications of the welding parameters. The QA inspector found that the ZPMC appeared to be in compliance with the contract documents.

Summary of Conversations:

As noted above.

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:	Acuna, Alfredo	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
