

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000120**Date Inspected:** 15-Apr-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**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:	Zhou Raqi ng	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:	NA	

Summary of Items Observed:

The Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe quality control functions related to welding, testing and fabrication procedures at the ZPMC facility on Changxing Island for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

At 1030 hours, the Caltrans QA inspectors observed welder and welder operator qualification testing being performed at ZPMC testing center. ZPMC QA Inspector, Mr. Lu Jian Hua was also present. The Caltrans QA Inspector observed Moody International supervising and monitoring the testing. The Moody International Certified Welding Inspector, Mr. Zhou Raqi ng stated that Moody would be testing eighteen shield metal arc welding (SMAW) welders, sixteen flux core arc welding (FCAW) welders in the 3G position and three submerged arc welding (SAW) welder operators in the 1G position. The Caltrans QA Inspector observed the eighteen SMAW welders and one SAW welder operator. Caltrans QA Inspector, Mr. Alfredo Acuna observed the sixteen FCAW welder and two other SAW welder operators.

The Caltrans QA observed that the eighteen welders, when welding with the SMAW welding process were not cleaning slag at weld terminations during replacement of electrodes while welding continuous weld passes. The welding travel speed for test plate 070406062 and 070406064 measured 62-64mm/min and on one of weld passes measured 58mm/min. Just outside the WPS range 60-170mm/min. The Caltrans QA also observed that during the welding of a weld pass, all the welders were braking the welding electrode arc. That is; each time they made a weave pass they would brake the arc and then resume welding. The Caltrans QA notified ZPMC QA Inspector, Mr. Lu of the observation results. Mr. Lu confirmed the findings and stated that these welders are trained to weld in this manner and, that Moody International CWI, Mr. Raqi ng stated that weld termination need not be cleaned of slag when the weld metal is still hot and also, the welding method of interrupting welding arc while welding a continuous weld pass is acceptable by AWS.

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

The Caltrans QA observed that no action was taken by ZPMC or Moody to correct welding method or weld cleaning prior to resuming the weld pass. The Caltrans QA observed that Moody International visually inspected eighteen SMAW welder qualification test plates and one SAW welder operator test plate. Moody International accepted eleven of the SMAW test and rejected seven. Moody International accepted the one SAW test plate. Moody International visual inspection and acceptance/rejection of the test plates appeared to comply with the project documents. The identified SMAW and SAW welder qualification test plates as follows:

SMAW Accepted: #070406052, 070406054, 070406056, 070406057, 070406059, 070406060, 070406061, 070406062, 070406063, 070406064 and 070406066.

SMAW Rejected: #070406051, 070406053, 070406055, 070406058, 070406065, 070406067 and 070406068.

SAW Accepted: #070406081.



Summary of Conversations:

Caltrans QA Inspector informed Mr. John Kinsey in regards to the welder qualification welding method being used to weld the test plates and weld pass cleaning. See Task Leader journal for this week.

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:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	McClary, David	QA Reviewer
