

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-002001**Date Inspected:** 24-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng**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:** Tower**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M, 114M, Orthotropic Box Girder (OBG) and Tower, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item Description	WBS	Dwg No.	Status
1 Tower Skin Plate New Tower Shop Bay 2: Caltrans QA observed ZPMC performing submerged arc welding (SAW), tower skin plate SA227 (E) joining P837-1 (E), splice weld ESD1- SA227 A/H- 13A. The welder operator is identified as Mr. Sun Bing Fa, welder stamp 062046, utilizing welding procedure WPS-B-T-2221-B-U3c-S-1. Caltrans QA measured current welding parameters at approximately 515 amps, 28.0 volts and 435mm/min (millimeters per minute) travel speed. Caltrans QA verified preheat and interpass temperatures during the welding activities. The preheat temperature prior to the start of welding measures more than 110 degrees Celsius but less than 230 degrees Celsius during maximum interpass temperature verification. Caltrans QA observed American Bridge/Fluor (ABF) Inspector, Mr. Li Han Jie and ZPMC QC inspector, Mr. Xu Le Feng monitoring welding activities at the work station.	NA	NA	Welding
2 Tower Skin Plate New Tower Shop Bay 2: ZPMC performing flame heat straightening operations on tower skin plate for mill induced distortion. The tower skin plate and heat straightening procedure are identified as skin plate SA80 (W), procedure HSR1 (T)-817, revision (0). Caltrans QA observed ZPMC heating the plate manually with a rose-bud torch. Caltrans QA observed ZPMC Quality Control Inspector, Mr. Yang Bai Qiang monitoring the heat straightening of the plate using a calibrated infra-red temperature indicating device to monitor the heat.	NA	NA	Heat Straightening

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

3 Tower Skin Plate NA NA Welding

New Tower Shop Bay 1: Caltrans QA Inspector observed ZPMC performing submerged arc welding (SAW), tower skin plate SA16, P149, P151, P150, P123, P124 and P661, root weld pass. The plates are joined to form one continuous weld That is identified as SSD1-SA16 F/G- 1, SA8, 7A, 3, 109A, 110 and 112A The suffix A letter designates that the weld is a complete joint penetration weld (CJP) and the weld number without the A suffix is a partial joint penetration (PJP) weld. The welder operator is identified as Ms. Chen Hong Xia, welder stamp 040460, utilizing welding procedure WPS-B-T-2221-B-U3c-S-1 and WPS-B-T-2321-B-P3-S1. Caltrans QA measured current welding parameters at approximately 510 amps, 30.0 volts and 460mm/min (millimeters per minute) travel speed. Caltrans QA verified preheat and interpass temperatures during the welding activities. The preheat temperature prior to the start of welding measures more than 110 degrees Celsius but less than 230 degrees Celsius during maximum interpass temperature verification. Caltrans QA observed, American Bridge/Fluor (ABF) inspector, Mr. Wei Jian Bo monitoring the activities at the work station. The following digital picture illustrates welding in progress.



Summary of Conversations:

As identified within the contents of this report.

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
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Reviewed By:	Cuellar, Robert	QA Reviewer
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