

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-000109**Date Inspected:** 23-Mar-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**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:** Lui Lui**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:** Bid: 52, 55 Tower & Girder**Summary of Items Observed:**

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

Caltrans QA inspector was present as requested by ZPMC to witness the mechanical testing for HP200746-3 and HP200747 as follows:

HP200746-3 Submerged Arc Welding (SAW) Complete Joint Penetration Groove Weld, 1G position with Steel Backing. AWS D1.5, Section 5.13.

All Weld Metal Tension Test

Reduced Section Tension Test

Side Bend Test

Charpy-V Notch (CVN) Test

Groove Weld Macro Test

Testing performed to AWS D1.5, Section 5.16, Figure 5.1 and Table 5.5 requirements.

Caltrans assigned lot number B49-016-07.

HP200747- Submerged Arc Welding (SAW) T-Joint Fillet Weld, maximum single pass and minimum multi size fillet weld, 1F position, AWS D1.5 Section 5.10.

Micro Test Specimens

Testing performed to AWS D1.5, Section 5.10.3, fillet weld soundness requirements.

Caltrans assigned lot number B49-017-07.

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ZPMC Quality Assurance Manager, Mr. Liu Liu submitted supporting testing documentation for review and records. The recorded test information appeared to be complete, accurate and complying with contract documents. The testing records are on file at Caltrans field office for future reference. See Caltrans Welding Witness Report (TL-6032), dated March 23, 2007 for additional information.

Caltrans QA inspector observed machining of the mechanical test specimens for welding procedure HP200749. The machine shop is identified as Shan Xun Gong Mao Machine Company. Caltrans QA inspector was accompanied by ZPMCs QA Inspector, Mr. Hu Gang. Caltrans QA inspector observed that the mechanical test sampling was being performed to AWS D1.5, Figure 5.1 requirements. Caltrans QA inspector observed ZPMC Quality Control inspector Ms. Zhou Dong Mei verifying that the test specimens are being machined to requirements. The samples were identified as all weld metal tension, reduced section tension, side bend, charpy (CVN) and groove weld macro specimens. The machining of the specimens appeared to be in conformance with project documents.

Summary of Conversations:

At 1100 hours. ZPMC Quality Assurance Manager, Mr. Lui Lui met with Caltrans QA and stated that ZPMC would be performing mechanical for PQR HP200746-3 at 1300 hours. At 1300 hours Caltrans was present to witness the mechanical testing.

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
