

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-014554**Date Inspected:** 09-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Guo Yanfei**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:** Bay 9**Summary of Items Observed:**

On this day Caltrans OSM Quality Assurance (QA) Inspector Christopher D'souza was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

Caltrans QA Inspector, Christopher D'souza monitored the Production Monitoring Tests (PMT) and production welding for the OBG Deck Panels U-rib welding.

The weld joint is a single bevel Partial Joint Penetration (PJP) weld that joins the U-rib to the deck plate. The Production Monitoring Test (PMT) is performed prior to the production of the Deck Panels (DP)

PMT #2 consists of (3) ribs totaling (6) weld joints(wj), numbered wj1 thru wj6. Welding was performed on Gantry 2 and represents production for DP 3138(PL3334A) – 001, DP 3138(PL3334B) – 001, DP 3136(PL3332A) – 001, DP 3136(PL3332B) – 001

The following is information that pertains to the welding of the PMT #2. Listed below are the WPS, welding essential variables, welders and weld joint number. Followed by a short summary:

*WPS: WPS-B-T-2342 – U1 - 5 (Dual Process GMAW root pass SAW fill and cover pass)

Welding variables minimum maximum range recorded is as follows:

GMAW-Volts:28.1-30.9 Amperage:357-364 Travel Speed:528mmppm

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SAW-Volts:24.6-25.5 Amperage:672-680 Travel Speed:536mmpm
Base Metal/Ambient Temperature: 23/25 degrees C

*Weld joint#(wj#)/welder(ID):

wj1- (203805) wj2- (059378)
wj3- (059418) wj4- (059421)
wj5- (059416) wj6- (201788)

ZPMC Quality Control (QC) performed visual inspection of the GMAW weld pass and the subsequent SAW weld pass. ZPMC QC noted both welds as visually compliant. ZPMC QC also performed Ultrasonic Testing of all of the weld joints and noted them as compliant. Caltrans QA Inspector, visually reviewed the GMAW weld pass and the SAW weld pass and noted them as compliant with contract documents. Upon completion of the visual review Caltran QA Inspector, marked areas of the PMT that will have macro-etch samples removed.

Gantry 1 was idle on this shift.

Production Monitoring Tests Macro Etches

The Quality Assurance Inspector performed a visual inspection of production monitoring tests(PMT) macro etch samples available, identified as DP 3138(PL3334A) – 001, DP 3138(PL3334B) – 001, DP 3136(PL3332A) – 001, DP 3136(PL3332B) – 001. The PMTs were welded on 06-09-10. All samples appeared to contain penetration greater than 80 percent. The Quality Assurance Inspector observed two samples that contained melt through.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

Summary of Conversations:

No relevant conversations.

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 Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Dsouza,Christopher	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
