

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-000482**Date Inspected:** 21-Sep-2007**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:** Xu Bing**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:** Mock Up**Summary of Items Observed:**

Elevation 114:

Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding being performed for the fabrication of the Mock Up at elevation 114. The QA Inspector randomly observed ZPMC qualified welder Bo Wen Ming utilizing the FCAW process to weld longitudinal stiffener MP1002-3 to Sub-Assembly (SA) MUSC-MA 107 Face A (Skin Plate A) on the Partial Joint Penetration (PJP) Weld Joint (WJ) Number 6. Mr. Bo was utilizing ZPMC WPS-B-T-2232-TC-P5-F-1. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 296 amps, welding voltage 31.2 volts with a travel speed of 300 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.

The QA Inspector observed ZPMC welding personnel fitting up longitudinal stiffeners piece marks MP 1010 and MP 1013 to SA MUSC-MA109. The QA Inspector observed ZPMC welding personnel performing heat straightening operations on piece marks MUC-A62 12 each and MUC-A63 12 each.

The QA Inspector observed a ZPMC helper blending welds attaching longitudinal stiffeners to SA MUSC-MA111 Face C (Skin Plate C).

The QA Inspector randomly observed a ZPMC burner utilizing the Carbon Air Arc Gouging Process to back gouge the root pass attaching longitudinal stiffener MP1004-2 to SA MUSC-MA 113 Face D Upper (Skin Plate D)

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

on the Complete Joint Penetration (CJP) WJ Number 8.

The QA Inspector randomly observed ZPMC Non Destructive Testing Technician Cai Xin Xin, utilizing the Magnetic Particle Testing Method (MT) to examine 1 excavation each in the CJP WJ's numbers 10 and 13 attaching longitudinal stiffeners piece marks MP1003-1 and MP1003-2 to SA MUSC-MA112 Face C (Skin Plate C), prior to performing first time weld repairs. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC qualified welder Jiang Zhou ID Number 040261, utilizing the FCAW process to weld longitudinal stiffener MP1010 to SA MUSC-MA 108 Face E (Skin Plate E) on the CJP WJ Number 2. Mr. Jiang was utilizing ZPMC WPS-B-T-2232-TC-P5-F-1. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 302 amps, welding voltage 31.2 volts with a travel speed of 305 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.



Summary of Conversations:

The QA Inspector asked ZPMC QA Representative Shen Xue Jun if he knew what the total length was of the defects found in WJ's 10 and 13, attaching longitudinal stiffeners piece marks MP1003-1 and MP1003-2 to SA MUSC-MA112 Face C (Skin Plate C). Mr. Shen informed the QA Inspector that he did not. The QA Inspector then asked Mr. Shen if he could get a copy of the Ultrasonic Testing Report, and Mr. Shen informed the QA Inspector that he would do so.

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: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer