

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-000573**Date Inspected:** 03-Oct-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: Ye Yongjun & Xu Bing
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: 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 77:

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 77. The QA Inspector randomly observed ZPMC qualified welder Yang Lei utilizing the Shielded Metal Arc Welding (SMAW) process to weld 2nd time repairs on an excavation in WJ number 4 outside, attaching longitudinal stiffener mp5-2 to Skin Plate E, Sub-Assembly (SA) MUSA-MA1. Mr. Yang was utilizing ZPMC Weld Procedure Specification (WPS) WPS-345-SMAW-2G(2F)-Repair. The QA Inspector observed ZPMC CWI Ye Yongjun monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 223 amps, welding voltage 27.2 volts with a travel speed of 186 millimeters per minute for Mr. Yang. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector randomly observed welding being performed for the fabrication of the Mock Up at elevation 77. The QA Inspector randomly observed ZPMC qualified welder Chen Ruyang utilizing the SMAW process to tack weld the 2 connection plates piece marks p296 and p297 to the tops of the longitudinal stiffener on Skin Plate D, SA MUSA-MA5. Mr. Ruyang was utilizing ZPMC approved WPS WPS-B-T-43(1)14. The QA Inspector observed ZPMC CWI Ye Yongjun monitoring weld parameters. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photographs provide additional detail.

Elevation 114:

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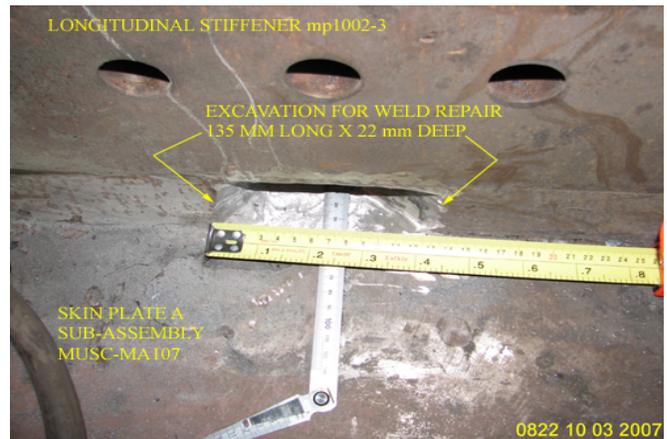
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The QA Inspector randomly observed ZPMC Non Destructive Testing (NDT) Technician Zhou Dongyun, utilizing the Magnetic Particle Testing Method (MT) to examine 100% of the full length of an excavation in Complete Joint Penetration (CJP) Weld Joint (WJ) number 3, attaching longitudinal stiffener piece mark MP1002-3 to Skin Plate A Lower, SA MUSC-MA107, prior to performing second time weld repairs. The QA Inspector also performed 100% MT verification examination of the same excavation. There appeared to be no indications. The following photographs provide additional detail.

Caltrans Quality Assurance (QA) Inspector Charlie Franco randomly observed welding being performed for the fabrication of the Mock Up at elevation 114. The QA Inspector randomly observed ZPMC qualified welder Lei Lichao utilizing the Flux Cored Arc Welding (FCAW) process to place the root pass on outside of WJ number 2 attaching longitudinal stiffener piece mark p268-3 to Interior Splice Assembly MUC-A58. Mr. Lei was utilizing ZPMC approved WPS WPS-B-T-2232-TC-U5-F. 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 30.3 volts with a travel speed of 310 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.

The QA Inspector observed a ZPMC arc gouger utilizing the Carbon Air Arc Gouging (CAAG) process to back gouge WJ number 2. WJ number 2 attaches longitudinal stiffener piece mark number p920-2 to Interior Splice Assembly MUC-A67.

The QA Inspector observed a ZPMC arc gouger utilizing the CAAG process to excavate an area at the end of WJ number 2, prior to a first time weld repair. WJ number 7 attaches longitudinal stiffener piece mark number mp1010 of Skin Plate E Lower, to SA MUSC-MA108.



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Summary of Conversations:

The QA Inspector asked ZPMC CWI Ye Yongjun if the repair to WJ 4 attaching longitudinal stiffener piece mark mp5-2 to Skin Plate E, SA MUSA-MA1, was a second or third time repair. Mr. Ye informed the QA Inspector that it was a second time repair. The QA Inspector then asked Mr. Ye, why this repair was not done when the part was setting vertical in the jig when all of the other repairs were performed. Mr. Ye then informed the QA Inspector, that it had been "missed" and only discovered after the part had been removed from the jig.

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
