

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-001798**Date Inspected:** 19-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Huang Wen-Pang**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:** OBG**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Bay 7 OBG:

The QA Inspector randomly observed a ZPMC Torch Cutting Operator utilizing a semiautomatic torch cutting apparatus, to cut access holes in 300 x 300 x 10 mm A500 GR B Structural Tube for Floor Beam Diagonals.

The QA Inspector randomly observed a ZPMC Carbon Air Arc Operator utilizing the Carbon Air Arc Process to remove transverse cracks in the welds attaching the flanges Floor Beam Web Sub-Assemblies FB016-04, FB001-02 and FB001-06. The work is being performed in accordance with ZPMC Critical Weld Repair (CWR) B-CWR040. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC Carbon Air Arc Operator utilizing the Carbon Air Arc Process to remove Ultrasonic Testing (UT) Rejects, observed and recorded by ZPMC QC. The work is being done in accordance with ZPMC Weld Repair Report (WRR) B-WR117 Rev 0. WJ FB007-05-045 attaches split flange piece mark X7M, to the 30 mm thick section of Floor Beam Web FB007-05.

The QA Inspector randomly observed ZPMC welder Dan Deyin ID Number 044795, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2G Position (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2232-TC-U4b-F-1, to weld the Complete Joint Penetration (CJP) Welds on the

WELDING INSPECTION REPORT

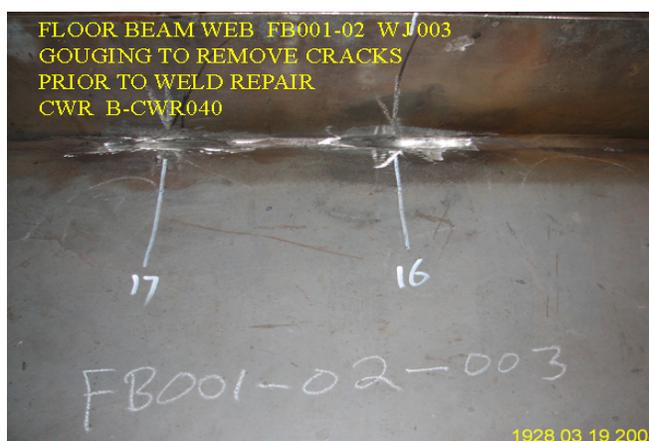
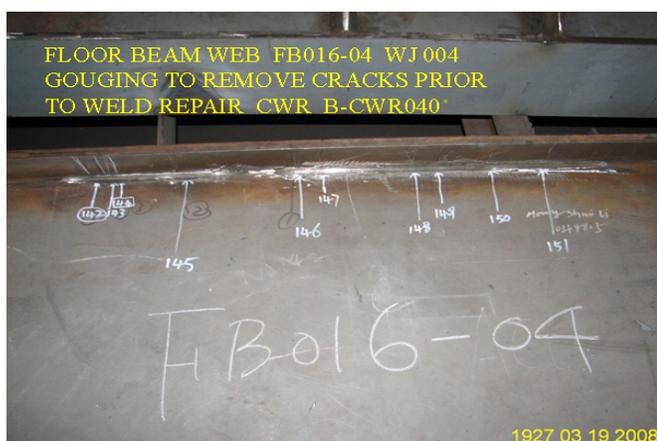
(Continued Page 2 of 3)

tapered ends of various stiffeners on Floor Beam Sub-Assembly FB021-02. The QA Inspector randomly observed ZPMC CWI Huang Wen-Pang monitoring weld parameters. The QA Inspector also monitored weld parameters and they are as follows: 292 amps, 29.2 volts with a travel speed of 465 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector performed a random 10% Visual Testing (VT) Inspection and a random 10% Magnetic Particle Testing (MT) Inspection on the cover passes of the WJ's 004, 010, 013, 014, 029, 030, 037, 038 and 048, attaching stiffeners and flanges to the Far Side of Floor Beam Web FB016-02. This inspection was performed after rework to correct indications observed during VT Inspection performed by the QA Inspector on 03-17-08. The QA Inspector accepted all of the welds listed above with the exception of WJ FB016-02-045, which still has a ZPMC marked Ultrasonic Testing (UT) Reject in the weld. The removal of the reject is being performed on this shift, but ZPMC CWI Huang Wen-Pang informed the QA Inspector that the repair would not be performed until the day shift on 03-20-08 after Magnetic Particle Inspection on the excavation has been completed.

The QA Inspector performed a random 10% VT Inspection and a random 10% MT Inspection on the cover pass of WJ 004 on the Far Side of Floor Beam Web FB016-03. This inspection was performed after rework to correct indications observed during VT Inspection performed by the QA Inspector on 03-18-08. The QA Inspector accepted WJ FB016-03-004. The QA Inspector observed that WJ FB016-03-045 still has a ZPMC marked UT Reject in the weld and is not accepted at this time.

The QA Inspector performed a random 10% VT Inspection and a random 10% MT Inspection on the cover passes of WJ 013 attaching a stiffener, and the WJ attaching the two flanges (this WJ is not identified on the ZPMC Weld Map), to the Far Side of Floor Beam Web FB015-03. This inspection was performed after rework to correct indications observed during VT Inspection performed by the QA Inspector on 03-18-08. The QA Inspector accepted both of the welds on the Far Side of FB015-03 listed above with the exception of WJ FB015-03-045, which still has a ZPMC marked UT Reject in the weld.



Summary of Conversations:

As noted in the above body of this report.

Comments

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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:	Hager,Craig	QA Reviewer
