

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-002018**Date Inspected:** 21-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2200**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** See Observations below**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 side panels & Tower skin plates**Summary of Items Observed:**

Caltrans Quality Assurance Inspector Mr. David Kelsey (QA Inspector) arrived at Shanghai Zhenhua Port Machinery Co (ZPMC) to observe the ZPMC Quality Control Inspectors noted below perform the duties and responsibilities as outlined in the Welding Quality Control Plan (WQCP), Contract Special Provisions and to randomly inspect the in-process welding fabrication at ZPMC fabrication facility for the Orthotropic Box Girder (OBG) and Tower bridge components.

The Caltrans QA Inspector performed in-process visual inspection on the submerged arc welding (SAW) process welding joining the skin plates ESD1-SA216 B/K-7B to the ESDI-SA216 A/K-17B in the tower bay#2 building.

The Caltrans QA Inspector performed in-process visual inspection on the flux cored arc welding (FCAW) process welding on side plate SP568 T plates welded to side plate in Bay# 3.

The Caltrans QA Inspector performed in-process visual inspection on the submerged arc welding (SAW) process welding joining side plates SP72A to SP60A in the new OBG building.

The Caltrans Inspector observed thermal cutting of various 100mm thick skin plates in tower bay# 3.

Bay 2 New OBG Building:

The Caltrans QA Inspector randomly observed in-process SAW welding of the previously mentioned bottom plates face side A within the parameters set forth in the WPS-B-T-2221-B-L2c-5-1. QA Inspector observed the

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ZPMC QC/CWI Inspector Mr. Chen Chi Ming and two CAWI monitoring welding voltage, pre-heat & interpass temperatures, weld pass width, profile/size and travel speed. The Caltrans QA Inspector checked the CWI qualifications and randomly verified the pre-heat & interpass temperatures, welding position, welding voltage, weld profile, size and interpass cleaning on the previously mentioned plates.

Tower Building Bay 2.

The Caltrans QA Inspector randomly observed in-process SAW welding of the previously mentioned skin plates (ESD1-SA216 B/K-7B to the ESDI-SA216 A/K-17B, Weld# 216) face side A within the parameters set forth in the WPS-B-T-2221-B-U3 C-S-1. QA Inspector observed the ZPMC QC/CWI Inspector Anqing Xiang and two CAWI monitoring welding voltage, pre-heat & interpass temperatures, weld pass width, profile/size, interpass cleaning and travel speed. The Caltrans QA Inspector checked the CWI qualifications and randomly verified the pre-heat & interpass temperatures, welding position, welding voltage, weld profile, size and interpass cleaning on the previously mentioned skin plate weld.

Bay# 3

The Caltrans QA Inspector randomly observed in-process FCAW welding of the previously mentioned T plates to the side plate within the parameters set forth in the WPS-B-T-2132-3 on the multihead FCAW automated welding machine. QA Inspector observed the ZPMC QC/CWI Inspector Mr. Wu Ming Kai and 4 CAWI monitoring welding voltage, pre-heat & interpass temperatures, weld pass width, profile/size and travel speed. The Caltrans QA Inspector checked the CWI qualifications and randomly verified the pre-heat & interpass temperatures, welding position, welding voltage, weld profile, size and interpass cleaning on the previously mentioned plates.

The in-process welding, fit-up & joint preparation, and thermal cutting observed appears to comply with WPS-B-T-2221-B-L2c-5-1, WPS-B-T-2221-B-U3 C-S-1, WPS-B-T-2132-3 the approved drawings, the WQCP, Contract Special Provisions and AWS welding code D1.5.



Item Description	WBS	Dwg No.	Status
1 Pic 241 Weld#216 SA216A/K-17B showing SMAW tack weld of joint root and in-process of cleaning tack pass			
2 Pic 242			

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Typical pre-heating using thermal panels on weld #216 100mm thick skin plates.

Summary of Conversations:

No significant conversations at the time of this report.

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:	Kelsey,David	Quality Assurance Inspector
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Reviewed By:	Cuellar,Robert	QA Reviewer
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