

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-003741**Date Inspected:** 28-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xian Juin Peng**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:** Tower**Summary of Items Observed:**

On this date, Caltrans Office of Structure Materials (OSM) Quality Assurance Inspector (QA) Raymond Lara was present at jobsite in Zhenhua Port Machinery Company facility on Changxing Island, China for the purpose of observing and monitoring the fabrication of the Tower.

Bay 1

The Quality Assurance Inspector observed ZPMC utilizing a milling machine in the beveling process on various longitudinal stiffeners.

The Quality Assurance Inspector observed ZPMC performing grinding and air carbon arc operations on various longitudinal stiffeners weld runoff tabs.

The Quality Assurance Inspector observed ZPMC utilizing chalk layout lines in an effort to aid in the fit up on longitudinal stiffener to skin plate B South Tower Assembly.

The Quality Assurance Inspector observed ZPMC personnel in process of performing fit operations on longitudinal stiffener plates to skin plate E South Tower Assembly.

Skin Plate A South Tower Assembly

The Quality Assurance Inspector observed ZPMC Caltrans approved welder 056134 utilizing flux core arc welding process on complete joint penetration weld number SSDI-SA-15 A/F welding longitudinal stiffeners plate

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to skin plate A South Tower Assembly. The Quality Assurance Inspector observed ZPMC Quality Control Personnel record parameters and verify preheat temperatures. The welding parameters observed by the Quality Assurance Inspector appeared to be within welding procedure specification WPS-B-P-2332-TC-P5-T-1.

Longitudinal Stiffener

The Quality Assurance Inspector observed ZPMC Caltrans approved welders 040385 and 040240, utilizing the flux cored arc welding process on a complete joint penetration in the flat position on longitudinal stiffener weld number ESDI-SA49 A/D 7B. The Quality Assurance Inspector observed ZPMC Quality Control Personnel record parameters and verify preheat temperatures. The welding parameters observed by the Quality Assurance Inspector appeared to be within welding procedure specification WPS-B-T-2231-B-U3-F.

Ultrasonic Testing

The Quality Assurance Inspector performed 10% random ultrasonic testing verification on longitudinal stiffener splice welds. The Quality Assurance Inspector performed the testing on the following welds; ESDI-SA233 A/F -1B, ESDI-SA48 A/D-5B, ESDI-SA49 A/D 6B, ESDI-SA49 A/D 14B, ESDI-SA49 A/D 18B, ESDI-SA49 A/D 23B, ESDI-SA219 A/D -29B, ESDI-SA49 A/D 13A, ESDI-SA49 A/D 17A, ESDI-SA49 A/D 30A, ESDI-SA49-22A, ESDI-SA233 A/F 12B, ESDI-SA49-A/D 3B, ESDI SA49 A/D 8B, ESDI-SA49 A/D 12B, ESDI SA49 A/D 21A, ESDI SA49 A/D 31A, ESDI SA49 C/D 1A, ESDI SA233 A/F 5B and ESDI SA49 A/D 10B. See Caltrans report TL-6027 Ultrasonic Testing Report, dated July 28, 2008 for additional information.

Magnetic Particle Test

The Quality Assurance Inspector observed ZPMC Magnetic Particle Technicians perform magnetic particle testing on the 72 hour inspection for the 43 meter elevation Tower Assembly Mock Up partial joint penetration fit lug connecting the diaphragm plate to longitudinal stiffener plate. The items observed by the Quality Assurance Inspector appear to meet contract requirements. The Quality Assurance Inspector performed a random magnetic particle testing verification on the 43 meter elevation Tower Assembly Mock Up partial joint penetration fit lug connecting the diaphragm plate to longitudinal stiffener plate. The items observed by the Quality Assurance Inspector appear to meet contract requirements. See Caltrans report TL-6028 Magnetic Particle Test Report, dated July 28, 2008 for additional information.

Bay 2

The Quality Assurance Inspector observed ZPMC utilizing a milling machine in the beveling process on various longitudinal stiffeners P1328 and P1330B.

The Quality Assurance Inspector observed ZPMC Ultrasonic Technicians perform ultrasonic testing on various longitudinal stiffeners.

The Quality Assurance Inspector observed ZPMC Magnetic Particle Technicians perform Magnetic Particle Testing on various longitudinal stiffeners to skin plate A South Tower Assembly tack welds. The items observed by the Quality Assurance Inspector appeared to meet contract requirements.

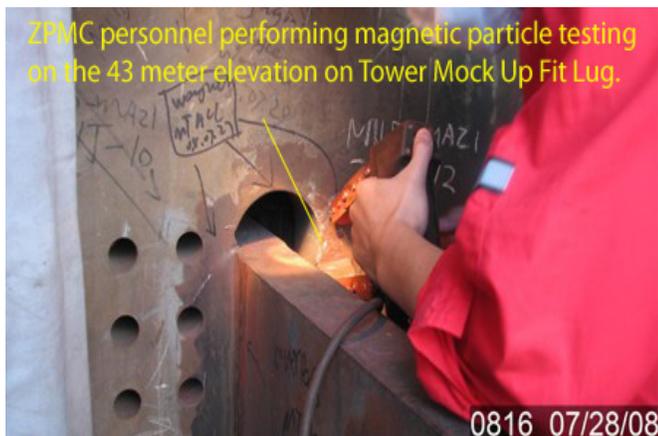
Skin Plate A East Tower Assembly

The Quality Assurance Inspector observed ZPMC Caltrans approved welders 053316, 069290, and 040775

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utilizing flux core arc welding process on complete joint penetration weld number SSDI-SA-15 A/F welding longitudinal stiffeners plate to skin plate A East Tower Assembly. The Quality Assurance Inspector observed ZPMC Quality Control Personnel record parameters and verify preheat temperatures. The welding parameters observed by the Quality Assurance Inspector appeared to be within welding procedure specification WPS-B-P-2332-TC-P5-F.



Summary of Conversations:

No relevant conversations on this date.

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 Joshua Ishibashi, (707) 649-5453, who represents the Office of Structural Materials for your project.

Inspected By: Lara, Raymond

Quality Assurance Inspector

Reviewed By: Lanz, Joe

QA Reviewer