

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-001302**Date Inspected:** 31-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Wu Ming Kai
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:** OBG & 89 M Mock Up**Summary of Items Observed:**

Caltrans Quality Assurance Inspector Gabriel Quintana (QA Inspector) arrived at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to observe fabrication and Quality Control Inspectors (QC Inspectors) perform their duties and responsibilities as specified in the contract documents, approved plans, fabrications documents and Special Provisions for this project. While on site the QA Inspector observed the following:

Bay 3- QA Inspector randomly observed ZPMC qualified welder Zhang Feng Identification (ID) #051246, utilizing the Flux Core Arc Welding (FCAW) process per the approved Weld Procedure Specification (WPS) WPS-B-T-2132-2 while performing tack welding on Side Plate SP005 weld joints SP033-01-001 thru SP033-01-008 to plate PL86A. QA Inspector observed ZPMC Certified Weld Inspector (CWI) Wu Ming Kai monitoring welding and preheating parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 160 amps, welding voltage 24volts. The weld parameters appeared to comply with contract requirements and the approved WPS.

Bay 3- QA Inspector randomly observed ZPMC qualified welder Li Mengqian ID #054460 performing tack welding of Side Plate SP056 at weld joint SP056-01-017/018 to plate PL97C. QA Inspector observed that preheating and welding current was monitored by QC Inspector Wu Ming Kai. QA observed the FCAW process is used per WPS-B-T-2132-2. QA Inspector observed welding parameters of 265 amps and 28 were used during the tack welding. Welding and welding parameters observed by QA Inspector appear to be in general compliance with the approved WPS and contract requirements.

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Bay 3- QA Inspector randomly observed ZPMC qualified welder Wei Dashuni ID #051246 performing tack welding of Side Plate SP078 at weld joint SP078-01-015/16 to plate PL110A. QA Inspector observed that preheating and welding current was monitored by QC Inspector Wu Ming Kai per the approved FCAW procedure WPS-B-T-2132-2. QA Inspector observed welding parameters of 275 amps and 28.4 volts were used during the tack welding. Welding and welding parameters observed by QA Inspector appear to be in general compliance with the approved WPS and contract requirements.

Bay 3- QA Inspector randomly observed ZPMC qualified welder Dong Jinbao ID #049775 performing weld repairs to Bottom Plate BP008 at weld joint SP008-01-024 to plate PL39A. QA Inspector observed that preheating and welding current was monitored by QC Inspector Wu Ming Kai. QA observed the FCAW process is used per WPS-345-FCAW-2G(2F) Repair. QA Inspector observed welding parameters of 267 amps and 29 volts were used during the weld repair. Welding and welding parameters observed by QA Inspector appear to be in general compliance with the approved WPS and contract requirements.

Bay 3- QA Inspector randomly observed ZPMC qualified welder He Yumei ID #048625, utilizing the FCAW process per the approved welding procedure WPS-B-T-2132-2 while performing tack welding on Side Plate SP074 weld joints SP074-01-007 thru 010 to plate PL107B. QA Inspector observed ZPMC Certified Weld Inspector (CWI) Wu Ming Kai monitoring welding and preheating parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 265 amps, welding voltage 28.4 volts. The weld parameters appeared to comply with contract requirements.

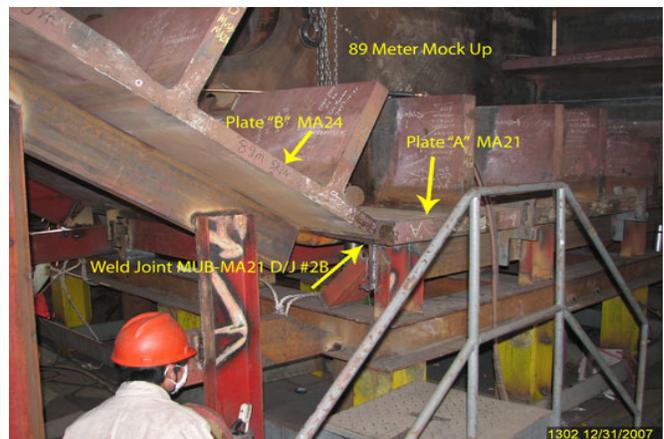
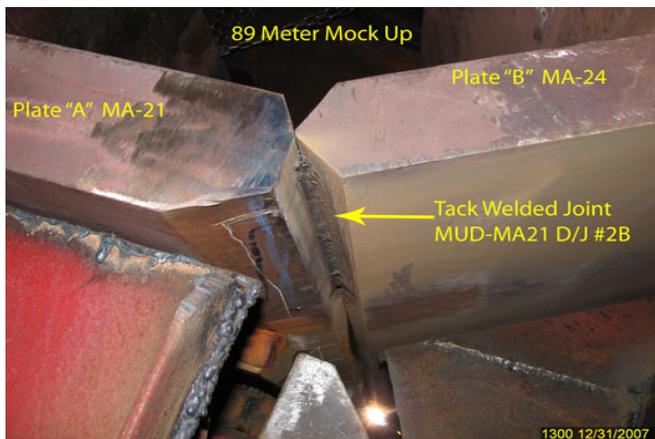
Bay 2- 89 Meter Mockup MUB-MA21 D/J

QA Inspector randomly observed ZPMC qualified welders Dai Lu ID #048659 and Zhang Feng ID #051246 tack welding Plate A Sub Assembly MA21 to Plate B Sub Assembly MA24 at weld joint #2B. QA Inspector observed welders using the SMAW process in the 4G welding position. Amps and volts recorded by the QA Inspector are the following: Dai Lu welding using 165 amps and 21.5 volts; Zhang Feng welding using 170 amps and 21 volts. Each welder is observed welding using TL-508 Electrode measuring 4.0mm at diameter. QA Inspector observed the ZPMC QC Inspector Ye Yong Jyn verifying that the preheat and interpass temperature did not exceed 230°Celsius, or fall below a minimum of 110°Celsius. QA Inspector observed that an approved WPS was not used during tack welding. QA Inspector is informed by QC Inspector Ye Yong Jyn that the weld joint will be welded using the Submerged Arc Welding (SAW) process, then the tack welds will be removed or fully consumed during the SAW process of the second side of weld joint.

At this stage of fabrication, all items observed by QA Inspector appear to comply with the requirements of the Standard Specifications, contract Special Provisions, approved drawings, Welding Code AWS D1.5 (2002) and approved Welding Procedure Specification. See the following photographs which show work observed and other details.

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Summary of Conversations:

General communications took place between the QA and QC Inspector.

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: Quintana, Gabriel

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer