

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-001980**Date Inspected:** 15-Apr-2008**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:** Sun Wei**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 Skin Plates**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector was present during the times noted above for observations relative to the work being performed.

Bay 2- New Tower Building

The QA Inspector randomly observed ZPMC qualified welder Ms. Liu Juan, ID #047481, performing groove welding of weld joint ZSD1-SA107B/J-16B filler passes. Ms. Liu was observed welding in the 1G (flat) position utilizing a Submerged Arc Welding (SAW) process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC Quality Control (QC) Inspector Yang Bai Oing verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). The QA Inspector observed preheat and welding parameters measured by the QC Inspector Yang Bai Oing and found them to be a preheat temperature of 110°C and welding parameters amps of 689, volts of 32.7, and a travel speed of 664. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

The QA Inspector randomly observed ZPMC qualified welder Ms. Chen Hangxia, ID #040460, performing groove welding of weld joint SSD1-SA107A/J-18B filler passes. Ms. Chen was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Zhu Zhanghai verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Zhu Zhanghai and found them to be a preheat temperature of 110°C and welding parameters amps of 675, volts of 32.3, and a travel speed of 667. Welding

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parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

Bay 1- New Tower Building

The QA Inspector randomly observed ZPMC qualified welder Ms. Yum Chuanjin, ID #050360, performing groove welding of weld joint SSD1-SA16E/G-11A filler passes. Ms. Yum was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Yang Qing Feng verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Yang Qing Feng found them to be a preheat temperature of 110°C and welding parameters amps of 675, volts of 32.4, and a travel speed of 663. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

The QA Inspector randomly observed ZPMC qualified welder Ms. Chen Hongxia, ID #040460, performing groove welding of weld joint SSD1-SA173A/K-15B filler passes. Ms. Chen was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Yang Qing Feng verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Yang Qing Feng found them to be a preheat temperature of 110°C and welding parameters amps of 670, volts of 32.4, and a travel speed of 664. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S.

Ultrasonic Testing

The QA Inspector also performed Ultrasonic Testing (UT) on approximately 10% of welds previously accepted by ZPMC ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QA Inspector examined a total of approximately 600mm of the weld length and observed no rejectable indications at the time of testing. The QA Inspector generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications. Accepted weld identification number was SSD1-SA15A/F-26B.

Magnetic Particle Testing

The QA Inspector performed Magnetic Particle Testing (MT) of approximately 10% of the QC MT completed Tower Skin Plate plate weld. The QA Inspector found the area examined appeared to be in general compliance with the contract documents and generated a TL-6028 MT report on this date. The weld designation number is as follows: SSD1-SA159D/J.

Summary of Conversations:

The QA Inspector spoke with the ZPMC QC personnel regarding the general location and work scheduled for the day.

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

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for your project.

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| Inspected By: | Clifford,William | Quality Assurance Inspector |
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| Reviewed By: | Cuellar,Robert | QA Reviewer |
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