

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-007417**Date Inspected:** 07-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See 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 and Tower Fabrication**Summary of Items Observed:**

CWI Inspector: Ms. Yu Dong Ping

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Prior to Caltrans QA Inspectors' concurring with issuance of OBG deck plate closed rib green tag releases a review of the ultrasonic inspection database is performed to verify all closed rib tack weld repair locations have been ultrasonically accepted. Today this QA Inspector, Mr. Paul Dawson, performed data entry of ultrasonic inspection information from the field generated Ultrasonic inspection data sheets onto the common drive computer database for the following OBG deck panels: DP155-001 and DP182-001.

OBG Assembly Area

ZPMC issued an "Inspection Notification Sheet" #3345 requesting QA to perform ultrasonic inspections of hold back welds on OBG segment 4BW where cross beam CB3 attaches to segment 4BW. ZPMC ultrasonic Inspectors had previously accepted ten percent length of all of these welds. This QA Inspector performed random ultrasonic inspections of welds SEG019E-070 and SEG019E-079 and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

OBG Bay 9

ZPMC issued an "Inspection Notification Sheet" #3345 requesting QA to perform ultrasonic inspections of OBG Traveler Railing Bracket bolt hole repair welds on TR6C-PP16, TR6C-PP20, TR6C-PP26, TR6C-PP28, TR5D-PP15, TR5D-PP21 and TR5D-PP27. Earlier in the week ZPMC ultrasonic Inspectors had previously rejected these welds and today this QA Inspector, Mr. Paul Dawson, observed the welds have now been repaired and the welds are identified as being ultrasonically accepted by ZPMC ultrasonic Inspection personnel. This QA Inspector performed random ultrasonic inspections of the welds listed above and items observed by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

Blast Shop #2

This QA Inspector performed random visual inspections of Tower Lift 1, South Skin Plate E double diaphragm interior surfaces at elevation 28 meters. The interior surfaces of this double diaphragm had recently been sandblasted and the surfaces are now free of rust oxide and other contaminants that had previously obscured portions of the welds. This QA Inspector visually observed approximately eleven weld locations that require grinding or welding to resolve the visual rejections. This QA Inspector obtained digital photographs of the rejected welds and the photographs have been stored on the common computer drive for future reference. This QA Inspector also made a sketch of the weld locations and a copy of the sketch has been placed in the tower visual tracking notebook which has other QA Inspectors' sketches of visual rejection locations. Below are photographs showing two of the areas that this QA Inspector identified as requiring rework.

Tower Bay 11

This QA Inspector observed ZPMC welder Ms. Wu Aixiang, stencil 040772 using submerged arc welding procedure specification WPS-B-T-2221-B-P3-S-2 to make groove weld ESD1-FCSA4-2A/C-66A. This QA Inspector observed Quality Control (QC) personnel monitoring the base material temperature with a 110 degree Celsius temperature indicating crayon and QC personnel was monitoring other welding attributes. This QA Inspector measured a welding current of 650 amps and 30.5 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

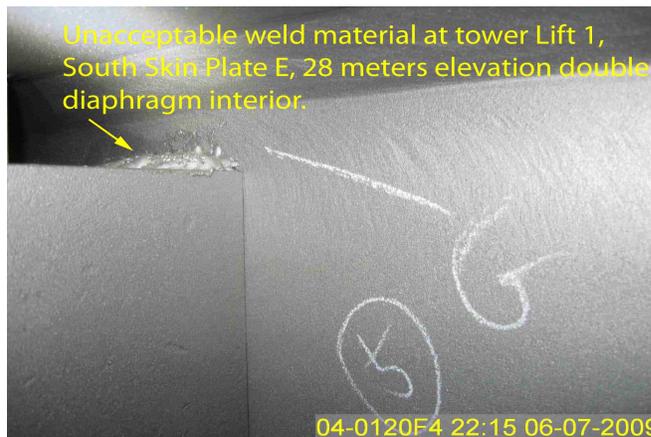
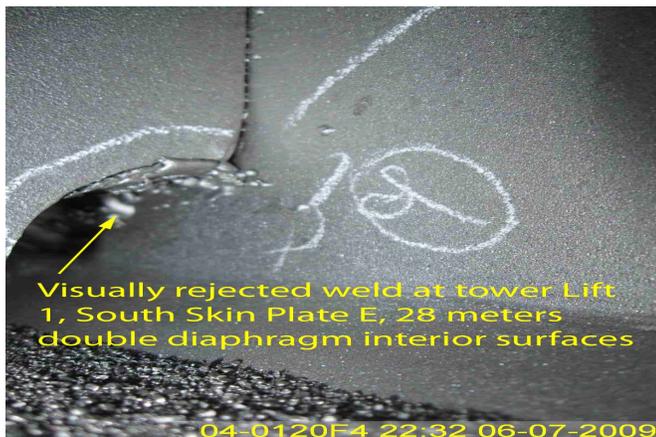
This QA Inspector observed ZPMC welder Mr. Wu Zhijun, stencil 062611 using submerged arc welding procedure specification WPS-B-T-2221-B-U3C-S-2 to make groove weld ESD1-FDSA4-2A/D-4A. This QA Inspector observed Quality Control (QC) personnel monitoring the base material temperature with a 110 degree Celsius temperature indicating crayon and QC personnel was monitoring other welding attributes. This QA Inspector measured a welding current of 690 amps, 31.8 volts and a welding travel speed of 420 mm per minute. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Ms. Ji Guo Hong, stencil 057994 using submerged arc welding procedure specification WPS-B-T-2221-B-U3C-S-2 to make groove weld ESD1-FCSA4-2A/C-40A. This QA Inspector observed Quality Control (QC) personnel monitoring the base material temperature with a 110 degree Celsius temperature indicating crayon and QC personnel was monitoring other welding attributes. This QA

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspector measured a welding current of 660 amps, 30.1 volts and a welding travel speed of 480 mm per minute volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.



Summary of Conversations:

See above.

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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
