

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-001680**Date Inspected:** 01-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**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:	Zhu Zhonghai, Chen Chihming, CWI			OSM 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:	89/114 Meter Mock-Up/OBG		

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Tower Shop 89 Meter Mock-Up**89 Meter Mock-Up Strut sub-Assembly MUB-MA26-J/J:**

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Pan Meng ID#066673 groove welding fill passes at weld joint #30. Mr. Lei was observed welding in the 2G (horizontal) position utilizing flux cored arc welding (FCAW) process utilizing a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 semi automatic. QA Inspector Brannon observed the ZPMC QC CWI Inspector Mr. Zhu Zhonghai verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Zhu Zhonghai to be: preheat temperature of 120°C and welding parameters amps of 291, volts of 30.0, a travel speed of 301 mm/min and a shielding gas flow of 25L/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2332, revision 0.

Bay 2

QA Inspector Brannon randomly observed ZPMC personnel cutting stiffener for the 23 Meter, 28 Meter, 33 Meter, 38 Meter, 43 Meter and the 47.6 Meter. QA Inspector Brannon observed ZPMC QC CWI Mr. Xiong wenhui observing the cutting process.

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144 Meter Mock-up:

QA Inspector Brannon was informed by ABF David Larue that ZPMC was assembling the 114 Meter mock-up today.

Bay 3-OBG Side Plates:

QA Inspector Brannon randomly observed ZPMC Mr. Zhou Dong Yong performing Magnetic Particle Testing (MT) on side plates SP057A-01 welds 011~023, SP070A welds 001~012, SP045B welds 030~045 and SP045A welds 002~015 and accepted the above welds.

Bay 3-OBG (CWR025):

QA Inspector Brannon observed ZPMC Mr. Zhou Dong Yun performing Magnetic Particle Testing (MT) on side plate SP 5 areas that had been excavated on 02-29-08 and accepted the 5 areas for repair.

Bay 3-OBG (CWR025):

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Han Xiaofeng ID#054467 repairing tack weld for CWR025. Mr. Han was observed welding in the 2F (horizontal) position utilizing shield metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal brand E7018, class THJ506-Fe-1, manual. QA Inspector Brannon observed the ZPMC QC CWI Inspector Mr. Chen Chihming verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Hu Weiqing to be: preheat temperature of 160°C and welding parameters amps of 184. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-345-SMAW-2G(2F)-FCM-Repair.

Bay 3-OBG side plate:

QA Inspector Brannon randomly observed ZPMC qualified welders, ID#048801 (welds 13 & 14), ID#054459 (welds 17 & 18), ID#062447 (welds 21 & 22) fillet welding stiffener plates to side plate for SP023-001. The above welders was observed welding in the 2F (horizontal), position utilizing a flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 machine. QA Inspector Brannon randomly observed the ZPMC QC CWI Inspector's Mr. Chen Chihming verifying preheat and welding parameters were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon randomly verified the welding parameters, preheat and interpass temperatures and found them to be in accordance with the appropriate WPS. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-3132-5 revision 0.

Bay 3-OBG Side Plates (UT):

QA Inspector Brannon randomly observed ZPMC NDT technician Mr. Xue Hairong performed ultrasonic testing (UT) on side plate SP028-001 weld #049 and SP016-001 weld #057. QA Inspector Brannon observed writing on the side plate that Mr. Xue Hairong had accepted the welds.

Bay 1 - OGB Deck Panel (Gantry 1)

QA Inspector Brannon observed Production Monitoring Test (PMT) for the (SAW) process. QA Inspector Brannon observed the (SAW) process for production deck panel DP068-001 welds 1~10 and DP030-001 welds 1, 2, 5 & 6 closed rib welds. ZPMC welding personnel performed machine gas metal arc (GMAW) for the root pass and submerged arc welding (SAW) for the cover pass. Dual process WPS-B-T-2342-U1(U-rib)-3 was posted as

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the welding procedure specification for closed rib welding. The following weld joint and welder were recorded for the PMT, DP026-001 and DP030-001 weld joint (wj) wj-#1 Mr. Feng Chuan Hong ID#059371, wj-#2 Mr. Xiang Jie ID#059378, wj-#3 Mr. Gao Xin Dong ID#059361, wj-#4 Mr. Jiang Ting Guang ID#062255, wj-#5 Mr. Mr. Zhang Shao Hui ID#059403 and wj-#6 Mr. Xiang Huan Feng ID#059416. Welding operator for the GMAW and SAW process was Mr. Li Xide. QA Inspector Brannon randomly observed ZPMC QC CWI Inspector Mr. Chen Xi monitoring welding parameters were in accordance with the Welding Procedure Specification (WPS).

The following digital photograph below illustrates observation of the activities being performed.



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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon, Sherri	Quality Assurance Inspector
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Reviewed By:	Cuellar, Robert	QA Reviewer
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