

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-004769**Date Inspected:** 10-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	NA	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 Fabrication	

Summary of Items Observed:

Caltrans 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:

OBG Bay 1

The Caltrans QA Inspector arrived in OBG bay 1 at around 1845 hrs for observations of ZPMC using tack welding procedure number WPS-B-T-2342-U5(U-rib) to tack weld closed ribs onto deck panel DP346-001. The QA Inspector observed 1.4mm diameter GMAW welding electrode JM-56 lot number 80727915 were being used by ZPMC welders Mr. Lu Liang, stencil #059373 on the east end of the deck panel and Mr. Li Huabei stencil #59472 on the west end of the deck panel. During the hour when this QA Inspector was in OBG Bay #1 the QA Inspector observed no ZPMC CWI or Quality Control personnel were in this bay as the welding was being performed. The WPS specifications require the angle of the welding head is to be a minimum of 90 degrees and that the weld puddle should be pushed and not "dragged".

ZPMC welder Mr. Lu Liang, stencil #059373 was observed to have a welding current of approximately 340 amps, 25.3 volts and a shielding gas flow of 23 Liters per minute. Mr. Liang appears to be holding the welding head at an angle of approximately 90 degrees from the weld joint. Items observed by the QA Inspector appear to comply with project specifications.

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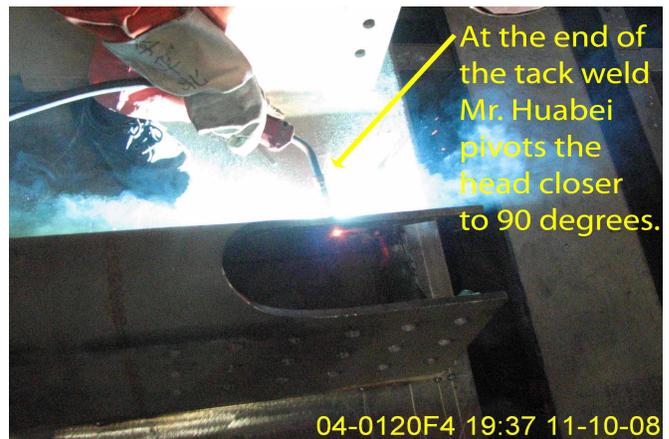
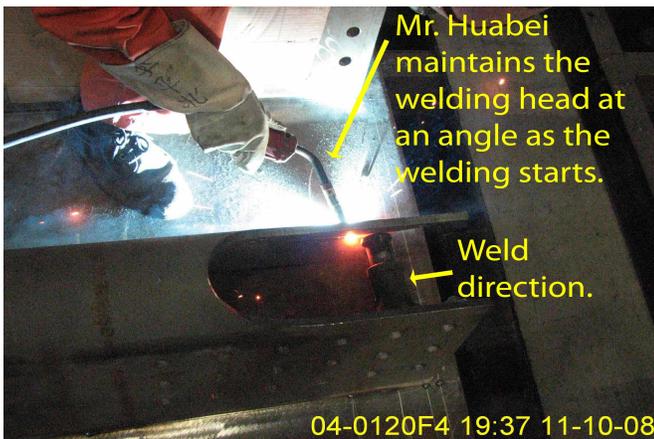
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ZPMC welder Mr. Li Huabei, stencil #059472 was observed to have a welding current of approximately 340 amps, 26.3 volts and a shielding gas flow of 23 Liters per minute. Mr. Liang appears to be holding the welding head at an angle of approximately 75 to 80 degrees slanted toward the direction of welding progression. Mr. Liang appears to be “Dragging” the weld puddle. See the photographs below for additional information. Items observed by the QA Inspector do not appear to fully comply with project specifications.

OBG Bay #8

The QA Inspector performed random AWS D1.5 visual and ultrasonic inspections of Floor Beam welds FB025-003-117, FB025-003-122 and FB025-003-101 as listed on the ZPMC Notification of Witness Inspection document #1386 and the welds appear to comply with project specifications. For additional information on these inspections see the TL6027 Ultrasonic Test Report.

The Notification of Witness Inspection document #1386 also lists several other floor beam welds that were to be inspected by ZPMC personnel at around 1340 hours and the QA Inspector observed several of these welds that were listed do not appear to have been ultrasonically inspected by ZPMC personnel.



Summary of Conversations:

See above.

Comments

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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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

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