

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-009730**Date Inspected:** 24-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Sun Bo	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:	Deck Panels	

Summary of Items Observed:

On this day Caltrans OSM Quality Assurance (QA) Inspector Christopher D'souza was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

OBG Assembly Yard

This QA Inspector performed conventional UT (Ultrasonic Testing) and Phased array ultrasonic testing (PAUT) on OBG segment 1AAW deck. This inspection was to evaluate an indication which was detected by QA Inspector Subhasis Bera while performed conventional UT in conjunction with ABF UT department for detection of planar transverse indication of OBW1-001. Details relating to this indication was plotted and forwarded to task leader for further evaluation.

North Lay down

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) on PAUT repair areas of closed rib Partial Joint Penetration (PJP) welds on deck panels designated as DP377-001. Welder is identified as 203805. ZPMC QC is identified as Duan Ya Bing. In process FCAW appears to be progressing in compliance with WPS 345-FCAW-2G (2F) Repair-1.

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) on VT repair

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

areas of closed rib Partial Joint Penetration (PJP) welds on deck panels designated as DP185-001 and DP266-001. Welder is identified as 059409. ZPMC QC is identified as Duan Ya Bing. In process FCAW appears to be progressing in compliance with WPS 345-FCAW-2G (2F) Repair-1.

QA Inspector performed Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled “Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld” after ZPMC welding personnel performed weld repairs of tacked areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate. The deck panels examined are as follows:

DP374-001: 2 tack weld locations found compliant and 0 tack weld locations found non-compliant.

DP428-001: 8 tack weld locations found compliant and 0 tack weld locations found non-compliant.

DP215-001: 4 tack weld locations found compliant and 1 tack weld locations found non-compliant

Tack weld locations found non-compliant are marked on U-rib and deck plate for ZPMC’s reference for repair.

See Caltrans U-rib to Deck Panel- Tack Weld Assessment sheets dated 24th October, 2009 for further information on PAUT inspections.

Bay 9

This QA Inspector observed ZPMC welding personnel performing Flux cored arc welding (FCAW) on Diaphragms to U-Rib designated as DP 3002-001 192~194. Welder is identified as 059443. ZPMC QC is identified as Chen Shi gang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133

This QA Inspector observed ZPMC welding personnel performing automated, in gantry, Gas Metal Arc Welding (GMAW) of closed rib Partial Joint Penetration (PJP) welds to deck plate designated as DP3024-001 and DP3046-001 on Gantry #2. In process GMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZPMC welding personnel performing automated, in gantry, Submerged Arc Welding (SAW) of closed rib Partial Joint Penetration (PJP) welds to deck plate designated as DP3024-001 and DP3046-001 on Gantry #2. In process SAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

Welders are identified as 059416, 059421, 059418, 201840, 201788 and 059403. ZPMC QC is identified as Chen Shi gang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2342 – U1

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

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

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Dsouza,Christopher	Quality Assurance Inspector
----------------------	--------------------	-----------------------------

Reviewed By:	Carreon,Albert	QA Reviewer
---------------------	----------------	-------------