

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-004273**Date Inspected:** 21-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China

CWI Name:	Liu Yang	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	

Summary of Items Observed:

Confined Space / Hot Work

ZPMC continues to work on tower shaft ESD1-Lift 1 (east tower shaft) which has been determined as a confined space area. ZPMC does not have the required Confined space permit posted at the entry of the confined space. Caltrans QA Inspector observed ZPMC employee's badges posted as working inside the area performing welding operations which also requires a Hot Work permit which also is not posted. With continued work being performed and no Confined Space permit this limits Caltrans QA Inspectors from monitoring the in progress work being performed inside the tower section. As ZPMC stopped work and went to lunch this QA inspector observed 8 badges posted on the sign in/out board, When ZPMC personnel onsite was asked if there were people inside the confined space it was relayed no. ZPMC is not adhering to the sign in/out procedure in putted by ABF for the confined space areas. This QA inspector observed after the lunch period that ZPMC had approximately 4 employees inside the confined space area performing work. 3 individuals were observed from the 47.6 M to the 38 M elevations. At the opposite end of the tower (base) near the 9 M elevation this QA inspector also observed 1 ZPMC worker inside the tower performing work. Due to the confined space this QA inspector was not able to enter and observe the continuing fabrication. Also noted was that no attendant was at the entry point near the 47.6 M elevation for confined space monitoring. Digital Photo below depicts the sign in/out board and the badges in place during ZPMC's lunch period and ZPMC personnel inside the tower.

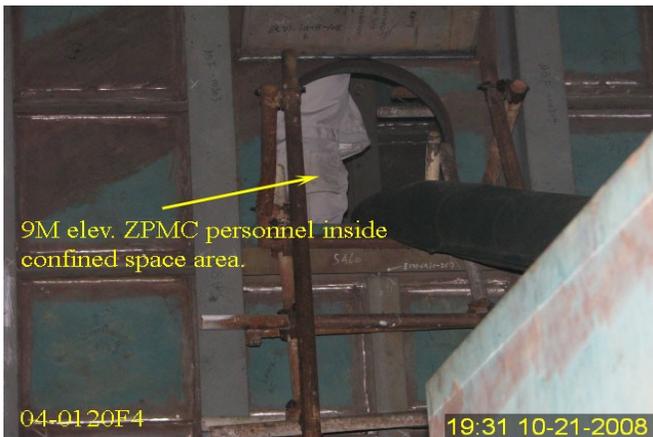
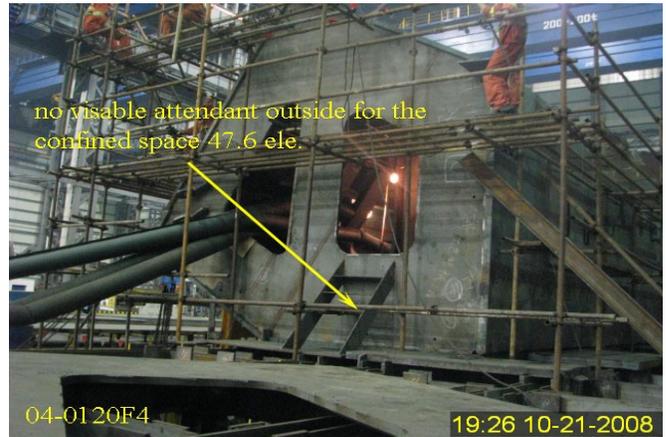
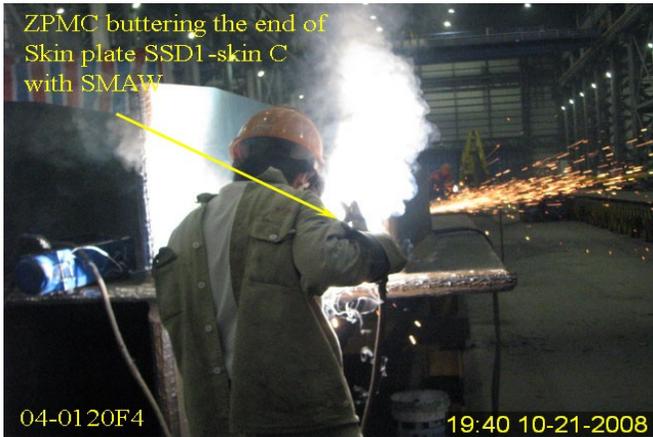
Heavy Tower bay 1 and 2

This Caltrans QA Inspector observed ZPMC "buttering" stiffener and skin plates for components on both the South and East towers Lift 1. ZPMC was using the SMAW welding process for this procedure. On South tower Skin C, WRR number T-WR326 was being used for both skin plate and stiffener ends due to dimensional differences from the welding process. ZPMC is adding approximately 8 to 10 mm of weld metal at these locations

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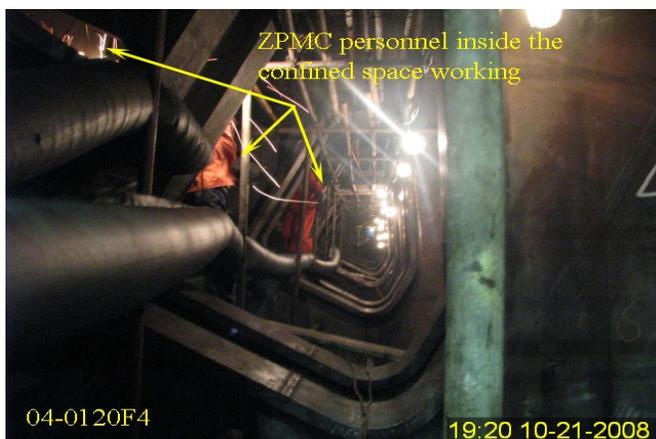
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under WPS-345-SMAW-2G (2F)-Repair and WPS-345-FCAW-2G (2F)-Repair welder for this location was ID # 056144. The primary welding procedure is SMAW. This QA inspector observed only one weld pass with the FCAW welding process that was approximately 200mm in length. Under the WRR ZPMC is required to perform 100% UT and MT inspection upon completion of welding. At 1600 hrs the welding parameters were as follows; 220 amps, 28.2 volts and a travel speed of 210 mm/min. Preheat for the welding process was recorded by ZPMC as being 180°C. During this QA Inspectors observation ZPMC was running horizontal stringer welds on the end face of skin C with the SMAW welding process.



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Summary of Conversations:

As noted 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 Josh Ishibashi, 1-376-471-0411, who represents the Office of Structural Materials for your project.

Inspected By: Riley, Ken

Quality Assurance Inspector

Reviewed By: Carreon, Albert

QA Reviewer