DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-009760
Date Inspected: 09-Oct-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name:	Xu Yumin and Li Jia			**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

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) Joe Alaniz was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

OBG Assembly Yard

1AAW + 1AW

FCAW build up welding performed on deck plate stiffeners located above bottom plate.
Welder is identified as Mr. Chen Zhenghua (220067). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-FCAW-4G (4F)-Repair and CWR778.

FCAW build up welding performed on deck plate stiffeners located above bottom plate.
Welder is identified as Mr. Li Guimin (220069). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-FCAW-4G (4F)-Repair and CWR778.

FCAW build up welding performed on deck plate stiffeners located above bottom plate.
Welder is identified as Mr. Cao Caijun (220064). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-FCAW-4G (4F)-Repair and CWR778.

For further information of weld buildup work in progress of above noted stiffeners, please refer to repair procedure CWR778 (Rev 1) and RFI 1904.

2AAW + 2AW

FCAW repair welding of weld joint 065 located on SSD34-PP8.5.
Welder is identified as Mr. Zhou Pan (220063). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-FCAW-3G (3F)-FCM-Repair and repair procedure WRR7477.

2AAW + 2AW

SMAW repair welding of weld joint 009 located on OBW1.
Welder is identified as Mr. Zhou Pan (048659). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-SMAW-3G (3F)-FCM-Repair and repair procedure WRR7477.

1AW + 1BW
This QA Inspector performed Magnetic Particle (MT) testing at the excavated areas tested and accepted by ZPMC MT Technician. This QA Inspector observed seven (7) Transverse Cracks present in the 2 excavation areas. The Y locations, length of excavation area and number of Transverse Cracks are as followed:
Transverse Weld Splice OBW1A-007
1. Y location 150mm, length of excavation 2,400mm, one (1) indication verified. This Transverse Crack is located in the first excavation area from Bottom Plate to Side Plate weld joint.
2. Y location 760~920mm, length of excavation 2,400mm, three (3) indications verified. These Transverse Cracks are located in the first excavation area from Bottom Plate to Side Plate weld joint.
3. Y location 2,650mm, length of excavation 2,300mm, one (1) indication verified. This Transverse Crack is located in the second excavation area from Bottom Plate to Side Plate weld joint.
4. Y location 2,800mm, length of excavation 2,300mm, one (1) indication verified (in 1AW base metal). This Transverse Crack is located in the second excavation area from Bottom Plate to Side Plate weld joint.
5. Y location 3,400mm, length of excavation 2,300mm, one (1) indication verified. This Transverse Crack is located in the second excavation area from Bottom Plate to Side Plate weld joint.
6. Y location 4,600mm, length of excavation 2,300mm, one (1) indication verified. These Transverse Cracks are located in the second excavation area from Bottom Plate to Side Plate weld joint.
Note: Measurements were pulled off bottom plate to side plate weld joint.

ZPMC MT inspection was performed and accepted at above noted excavation areas without an approved CWR by the engineer. This QA Inspector issued an incident report on the work.

NDT Observation

This QA Inspector observed ZPMC Ultra Sonic (UT) Technician performing UT on various locations in the trial assembly yard. Locations are as followed:

1. UT was performed on floor beam to side plate (looking west) located on the cross beam side of segment 1AW at panel point 8.5. Area was not accepted at this time, due to unacceptable indications present in weldment.

Miscellaneous Work In Progress

QA Inspector observed ZPMC's personnel performing various job functions in the trial assembly yard. Locations and description of work are as followed:

1. Grit blasting of various internal areas in segment 2W.

2. Segment 2E was moved next to segment 5E.

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

Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

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 (134-8257-0045), who represents the Office of Structural Materials for your project.

Inspected By:	Alaniz,Joe	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer