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-009758
Date Inspected: 07-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

1AE

SMAW repair welding of weld joints 133~143 located on OBE1.
Welder is identified as Mr. Li Bo (050433). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-B-P-2113-FCM-1.

2AAW + 2AW

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.

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.

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

5AE

SMAW repair welding of weld joint 004 located on SSD19-PP030.
Welder is identified as Mr. Kuai Wenshan (054013). ZPMC QC is identified as Xu Yumin.
The welding variables recorded by QC appeared to comply with WPS-345-SMAW-2G (2F)-FCM-Repair and repair procedure CWR797.

NDT Observation

This QA Inspector observed ZPMC Magnetic Particle (MT) Technician performing MT on various locations in the trial assembly yard. Locations are as followed:

1AE + 1AAE (weld joint OBE1-001)
1. Y location 2,430mm (off bike path side), length of excavation 150mm, approximately 14mm in depth of excavation, 5 transverse indications present.
2. Y location 8,070mm (off bike path side), length of excavation 180mm, approximately 15mm in depth of excavation, 0 transverse indications present.
3. Y location 8,670mm (off bike path side), length of excavation 160mm, approximately 16mm in depth of excavation, 4 transverse indications present.

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 weld OBW1-002 (edge plate) repair areas with a 70º wedge. Scanning “D” pattern was observed at time of UT inspection. Area was not accepted at this time, due to unacceptable indications present in weldment.

4. Y location 5,300mm (off bike path side), length of excavation 124mm, approximately 1 transverse indication present.
5. Y location 9,780mm (off bike path side), length of excavation 130mm, approximately 3 transverse indications present.
6. Y location 2,750mm (off bike path side), length of excavation 135mm, approximately 2 transverse indications present.

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. UT reject excavation on diaphragm to floor beam flange weld joint in progress at counter weight side of segment 1AW. Y location is approximately 400mm from edge plate (facing west) and length of excavation is approximately 300mm in length.

2. UT reject excavation on 1AW to 1AAW side plate weld joint OBW1A-004 located on cross beam side of segment. See note below.

3. UT reject excavations in progress on 1AW to 1BW side plate weld joint OBW1A-007 located on counter weight side of segment. See note below.

Note:
(2.) This QA Inspector noted at Y location approximately 4000mm (off bottom plate), one transverse indication was observed without MT performed.

(3.) This QA Inspector noted at Y location approximately 2800mm (off bottom plate), one transverse indication propagated into base metal (1AW plate). Transverse indication was still visible (sharp) at a depth of 14.83.

Note:
Due to China National Holiday, work was limited in the OBG Trail Assembly Yard on today's work shift.

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