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-012049
Date Inspected: 17-Jan-2010

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

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	An Qing Xiang, Du Zhi Qun	**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:

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad 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:

BAY 11 EAST TOWER LIFT 4 C/D CORNER SEAM

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

ESTL4-2B/L-57A
ESTL4-2L/L-2A

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 11

STRUT ANGLE CONNECTION PLATE
SMAW welding of weld joint 1B located on ED1-SA4-68-131M-1.

Welder is identified as 040614. ZPMC QC is identified as Mr. Mao Bin Bin.
The welding variables recorded by QC appeared to comply with WPS-B-T-3211-Tc-U5b-1.

SMAW welding of weld joint 1B located on ND1-SA4-68-127M-8.
Welder is identified as 040611. ZPMC QC is identified as Mr. Mao Bin Bin.
The welding variables recorded by QC appeared to comply with WPS-B-T-3211-Tc-U5b-1.

BAY 10

SOUTH TOWER LIFT 5 A/E CORNER SEAM
SMAW welding of weld joint 3B located on SSD1-TL5-1B/F.
Welder is identified as 040365. ZPMC QC is identified as Mr. Li Peng Fei.
The welding variables recorded by QC appeared to comply with WPS-B-T-3212-Tc-U5b-1.

SOUTH TOWER LIFT 5 A/B CORNER SEAM
SMAW welding of weld joint 9B located on SSD1-TL5-1B/F.
Welder is identified as 057258. ZPMC QC is identified as Mr. Li Peng Fei.
The welding variables recorded by QC appeared to comply with WPS-B-T-3221-B-U4b.

During the random Quality Assurance(QA) in process verification of West Tower lift 4, this QA Inspector observed that ZPMC welding personnel performing weld repair of B/C corner seam of West tower lift 4 using Flux Cored Arc Welding (FCAW) process. The weld numbers are identified as WSTL4-2L/L-3A/B for 485 grade material and WSTL4-2B/L-58A/B for 345 grade material. ZPMC personnel performing the weld repair at the terminal of 345 grade and 485 grade material by using WPS-345-FCAW-1G(1F)-REPAIR with Supercored 71H filler wire. The required filler wire for welding of these joints is K-71TSR with WPS-345+485-FCAW-1G-REPAIR. The weld joint is Complete Joint Penetration (CJP) weld. The material is designated as non Seismic Performance Critical Member (non SPCM). The member is located at Tower bay no. 11.

During the random Quality Assurance(QA) in process verification of Tower Strut plate, this QA Inspector observed that ZPMC placed a 9.7 ton weight on a 16mm thick Tower Strut web for the purpose of straightening. ZPMC CWI Yu Dong Ping referenced heat straightening document HSR1 (T)-11020 Rev. 0 as being the controlling document. The referenced document does not indicate any weight and/or mechanical force being used for straightening. 66 degree Celcius “Tempilstick” did not melt when applied to material. The weld numbers are identified as ED1-STSA4-6-131-1-7A/B, 8A/B; ND1-STSA4-6-127M-1-7A/B, 8A/B; ND1-STSA4-6-127M-2-7A/B, 8A/B. The material is designated as Seismic Performance Critical Member (SPCM). The member is located at Tower Bay No. 11.

The attached photographs provide additional detail.

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

WELDING INSPECTION REPORT

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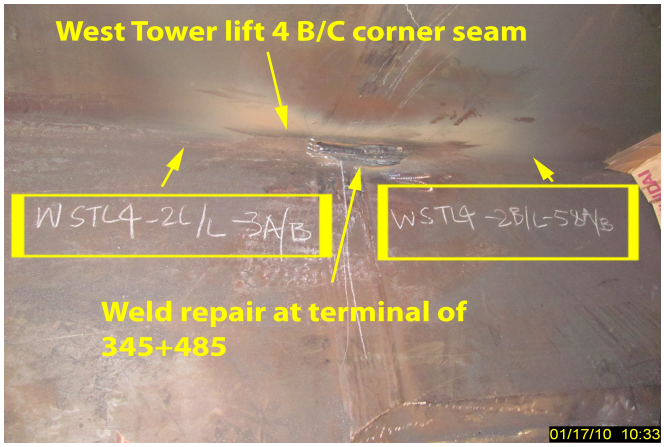

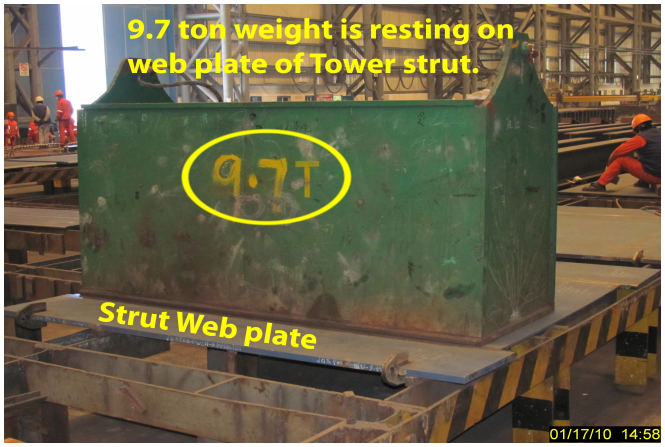

Summary of Conversations:

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

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer