

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019254**Date Inspected:** 25-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen.**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 components.**Summary of Items Observed:**

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

Bay 14:

This QA Inspector observed the following work in progress:

OBG Seg 13AW:

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3013AD-026 [Floor Beam (FB) 3186A to Side Panel (SP) 3091B, complete joint penetration (CJP) weld, at panel Point (PP) 119-1500]. The welder is identified as 067184 and was observed welding in the 3G position. ZPMC Quality Control (QC) was identified as Qiu Wen. The welding variables recorded by QC appeared to comply with Welding Procedure Specification (WPS): B-T02233-TC-U4b-F.

For the above mentioned weld:

- Pre-heating was observed to be done using electric blankets.
- However, ZPMC personnel did not appear to be following the New Weld Procedure (Rager / McQuaid).

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- Minimum pre heating temperature of 140C was not maintained when welding was in progress.
- This QA Inspector informed about this to ZPMC QC Qiu Wen, that an Incident Report will be raised for this.
- See attached photos for further details.

OBG Seg 13CW:

Repair welding of weld joint no: SEG3015H-050 [Floor Beam (FB) to I-rib stiffener on Bottom Panel (BP), complete joint penetration (CJP) weld at Panel Point (PP) 123]. The welder is identified as 045280 and was observed welding in the 3G position. Welding process was identified as Flux Cored Arc Welding (FCAW). ZPMC QC was identified as Qiu Wen. The welding variables recorded by QC appeared to comply with WPS: 345-FCAW-3G(3F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 17717 Rev-0.

Repair welding of weld joint no: SEG3015E-035 (FB to I-rib stiffener on BP, CJP weld at PP124). The welder is identified as 045280 and was observed welding in the 3G position. Welding process was identified as FCAW. ZPMC QC was identified as Qiu Wen. The welding variables recorded by QC appeared to comply with WPS: 345-FCAW-3G(3F)-FCM-Repair. Repair welding was done as per WRR: B-WR 17724 Rev-0.

Repair welding of weld joint no: SEG3015F-327 [Edge Beam (EB) to FB, CJP weld at PP123.5]. The welder is identified as 037723 and was observed welding in the 4G position. Welding process was identified as SMAW. ZPMC QC was identified as Qiu Wen. The welding variables recorded by QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per WRR: B-WR 17593 Rev-0.

OBG Seg 13AW:

Repair welding of weld joint no: SEG3013F-007 [Longitudinal Diaphragm (LD) to FB; CJP weld]. The welder is identified as 051348 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Sun Tian Ling. The welding variables recorded by QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per WRR: B-WR 17567 Rev-0.

OBG Seg 14W:

ZPMC NDE personnel performing Ultrasonic Testing (UT) of CJP weld of LD to BP, after completion of repair welding. Still some of the locations were marked for repair. Details as mentioned below.

- SEG3020AB-104 and 109: 3 locations marked for repair.
- SEG3020AB-106, 107 and 108: 1 location marked for repair.
- SEG3020AB-105 : 2 locations marked for repair.

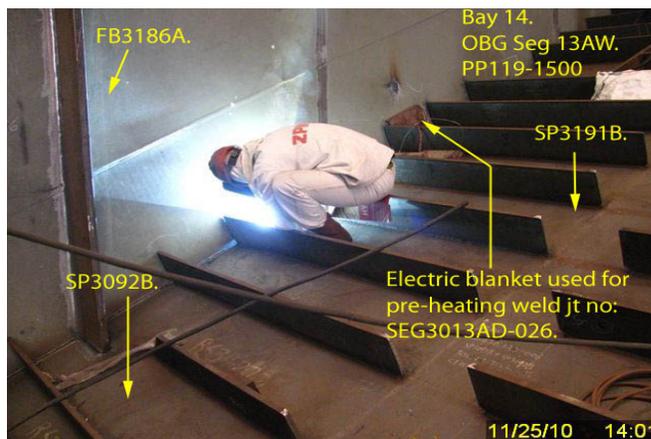
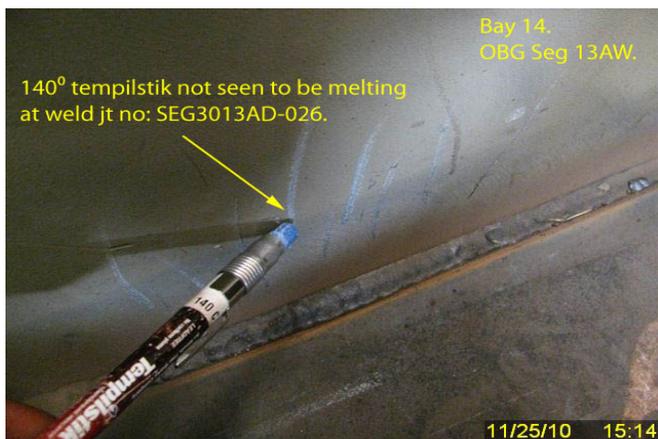
It was also observed that for the repair welding performed by ZPMC personnel, Magnetic Particle Testing (MT) was not done after weld excavation and before starting of repair welding.

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

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documents.



Summary of Conversations:

No significant conversations were reported on this date.

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; phone: 15000422372., who represents the Office of Structural Materials for your project.

Inspected By: Wadkar,Sailesh

Quality Assurance Inspector

Reviewed By: Patterson,Rodney

QA Reviewer