

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-019418**Date Inspected:** 17-Jan-2011**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:** Mr. An Qing xiang**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu 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 observed and/or found the following:

OBG Assembly Bay- 14.

The following Non Destructive Testing (NDT) Inspection was carried out as per the ZPMC submitted Notification No. 08200.

**Magnetic Particle Testing (MT)**

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a MT report for this date. The members are identified as OBG weld Components. Total number of welds MT Tested: 12 No's. The weld designations inspected were as follows:

1. SEG3013AX-080,079
2. SEG3013M-202
3. SEG3013AX-085,086
4. SEG3013M-208,201,200,207,206
5. SEG3013P-249,256

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This QA Inspector randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) welding of weld joint identified as DP3170-001-019. Welder is identified as 203871. ZPMC Quality Control (QC) is identified as Mr. Li ping. The welding variables recorded by QC personnel appeared to comply with Welding Procedure Specification(WPS): WPS-B-T-2232-ESAB.

FCAW welding of weld joint identified as DP3171-001-022. Welder is identified as 048433. ZPMC Quality Control (QC) is identified as Mr. Li ping. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-T-2232-ESAB.

Shielded Metal Arc welding (SMAW) welding of weld joint identified as DP3173-001-284. Welder is identified as 066459. ZPMC Quality Control (QC) is identified as Mr. Li ping. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM.

SMAW welding of weld joint identified as SEG3020K-036,038. Welder is identified as 037748. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-P-2214-TC-U4b-FCM.

SMAW welding of weld joint identified as SEG3020D-227. Welder is identified as 037840. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-P-2214-TC-U4b-FCM.

FCAW Repair welding of weld joint identified as SEG3020BB-055. Welder is identified as 066695. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables appeared to comply with WPS: WPS-345-FCAW-2G (2F)-ESAB-Repair-FCM. The repair welding was being performed as per the Critical Welding Repair Report (CWR) No: B-CWR2752. This weld was previously rejected by ZPMC UT Technicians and recorded on UT Report no.B787-UT-18580.

During the QA random in-process observations of the fabrication of OBG Lift 14 West Anchor plate (AP) AP3019A, this QA observed one open Rib Stiffener base material was bent due to improper handling of the material. The stiffener is identified as X5010A. The deformation measured to be approximately 30 mm per 110 mm length from the flat surface. This stiffener is welded to plate identified as PL3526A (SPCM). This QA informed to Lead QA for this issue. Refer the attached photos for more information.

This QA did not generate an Incident report for the above issue as per the Lead QA Inspector's instruction.

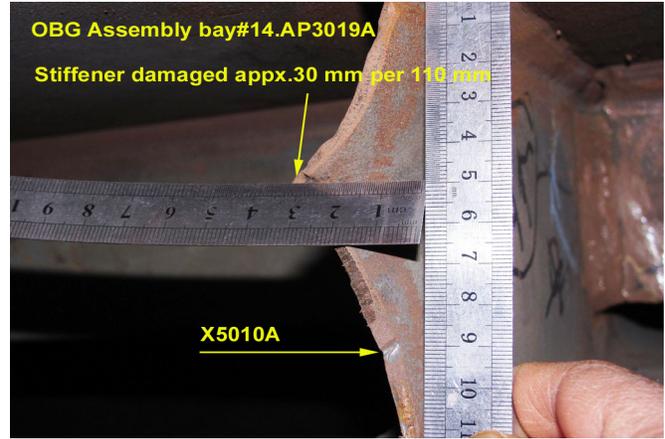
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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## 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 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

**Reviewed By:** Peterson,Art

QA Reviewer

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