

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-020909**Date Inspected:** 14-Feb-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. Sha zhi**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.

This QA Inspector randomly observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint identified as SEG3020E-111,113. Welder is identified as 067764. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel observed appeared to comply with Welding Procedure Specification (WPS): WPS-B-P-2214-TC-U4b-FCM-1.

SMAW welding of weld joint identified as DP3173-001-019. Welder is identified as 066443. American Bridge/Fluor (AB/F) QA is identified as Mr. Shen jian. The welding variables recorded by QA personnel observed appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM-1.

SMAW welding of weld joint identified as DP3174-001-019. Welder is identified as 067520. American Bridge/Fluor (AB/F) QA is identified as Mr. Shen jian. The welding variables recorded by QA personnel observed appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM-1.

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Flux Cored Arc Welding (FCAW) welding of weld joint identified as DP3176-001-336. Welder is identified as 048696. American Bridge/Fluor (AB/F) QA is identified as Mr. Shen jian. The welding variables recorded by QA personnel observed appeared to comply with WPS: WPS-B-T-2133-ESAB.

FCAW welding of weld joint identified as SEG3020BB-115. Welder is identified as 066421. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-T-2133-ESAB.

FCAW welding of weld joint identified as SEG3020BB-117. Welder is identified as 067888. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-T-2133-ESAB.

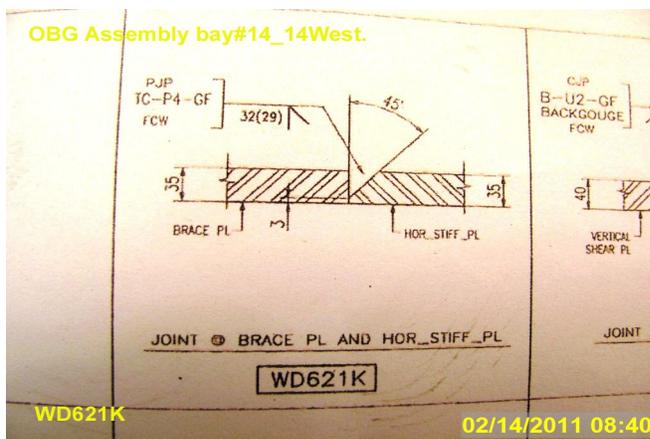
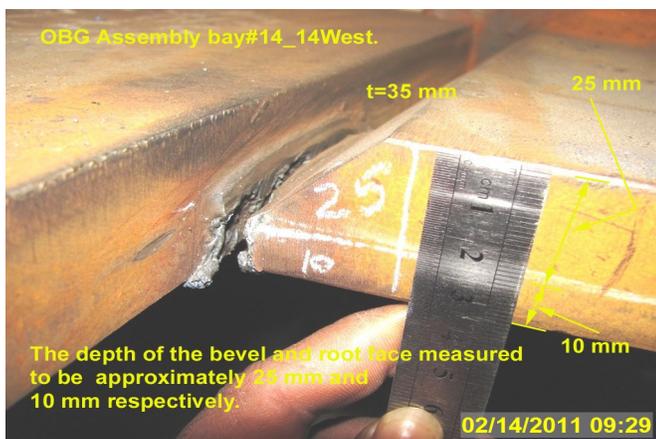
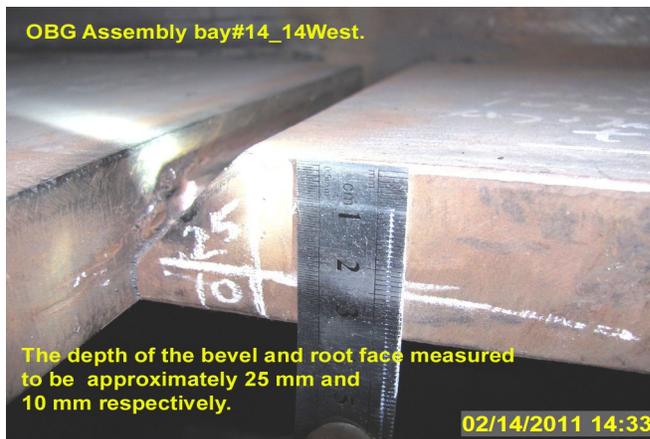
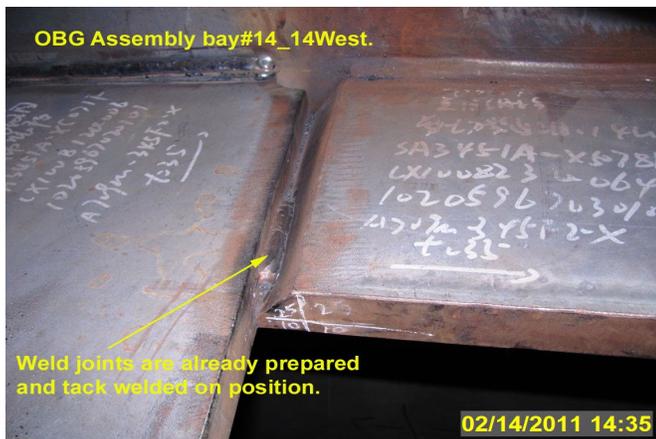
SMAW Repair welding of weld joint identified as SEG3020BB-019. Welder is identified as 045246. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-345-SMAW-2G (2F)-FCM-Repair. The repair welding was being performed as per Critical Welding Repair Report (CWR) No: B-CWR2752 Rev.1. This weld was previously rejected by ZPMC QC personnel and recorded on UT report B787-UT-18580R1.

During random Visual Testing of OBG lift 14West Subassemblies SA3442A,49A,50A,and 51A, this QA observed that the depth of bevels and root face dimensions of the tack welded subassemblies previously mentioned did not meet the minimum requirements of the approved weld detail drawings. The applicable approved weld detail drawing identified as WD621K specify that depth of the bevel and root face shall be 32 mm and 3 mm respectively. The depth of the bevel and root face as measured by this QA approximately 25 mm and 10 mm respectively. The weld joints are Partial Joint Penetration (PJP). The affected welds are identified as SA3442-001-021, SA3449-001-021, SA3450-001-021 and SA3451-001-017. These joints are joining to brace plates to horizontal stiffener plates. The base metal thickness is 35 mm. The material is designated as Seismic Performance Critical Material (SPCM). This QA marked the affected weld joints and informed ZPMC Quality Control (QC) Inspector identified as Mr. Zhulin of this issue. Mr. Zhulin informed this QA that the joints would be corrected in a manner compliant with the contract documents prior to start the welding. This QA also informed the above issue to shop Lead QA inspector (verbally). Refer the attached photos for reference.

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.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer