

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-018829**Date Inspected:** 20-Dec-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:** Mr. Tian Lei**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:

BAY- 1

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07852.

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 MT report for this date. The members are identified as OBG Barrier rail weld Components. Total number of welds MT Tested: 64 No's. The weld designations are review as follows:

1. E2-SB1-033-127~131,083,069,070
2. E2-SB1-026-127~131,083,069,070
3. E2-SB1-055-127~131,083,069,070
4. E2-SB1-045-127~131,024,038,039
5. E2-SB1-052-127~131,024,038,039

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6. E2-SB5-037-127~131,083,069,070
7. E2-SB1D-049-127~131,024,038,039
8. E2-SB1D-032-127~131,024,038,039

Visual Testing (VT)

This QA performed Random VT of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. The members are identified as OBG Barrier rail weld Components. Total number of components VT Tested: 8 No's. The component designations are review as follows:

1. E2-SB1-033,026,055,045,052
2. E2-SB5-037
3. E2-SB1D-049,032.

Signed off the following green tag:

1. 15422.

BAY- 2

This QA Inspector Randomly observed the following work in progress:

During QA random in-process observations of the fabrication of OBG lift 13A, West Grillage plate SA7512A, this QA observed ZPMC welding personnel performing Shielded Metal Arc Welding(SMAW) on Seismic Performance Critical Material (SPCM) by using unapproved electrodes on the grillage plate base metal to temporary lifting lug joint. The Caltrans (CT) Engineer approved Welding Procedure Specification (WPS)-WPS-B-P-2112-FCM specify that E7018-1 electrodes shall be used. The welder was using CHE50 electrodes which are not mention on the above said WPS. The weld is fillet joining to base plate (X4103B-SPCM-TTP) to lifting lug. The Y locations are 335 mm, 420mm, 145mm and 150mm as shown on the picture below. The length of the weld is approximately 150 mm. The SPCM member is identified as X4103B. The material thickness is 75 mm. This QA informed ZPMC Quality Control (QC) indentified as Mr. Zhu jun and CT Lead QA identified as Mr. Albert Carreon. Mr. Carreon informed to ZPMC QA identified as Mr. Zhang wei. Mr. Zhang wei informed to this QA and Lead QA that temporary lifting lug would be removed by grinding and ZPMC will perform MT on lifting lug removed areas.Refer the attached photos for further information.

This QA did not generate an incident report for the above issue, the issue has been corrected in a manner compliant with the contract documents.

BAY- 3

SMAW welding of weld joint EP3017-001-048.049. Welder is identified as 037996. ZPMC Quality Control (QC) is identified as Mr. Wang liyang. The welding variables appeared to comply with the Applicable WPS: WPS-B-P-2211-TC-U4b.

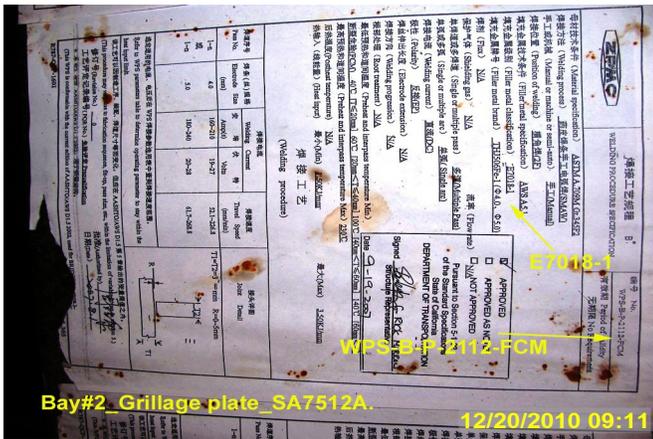
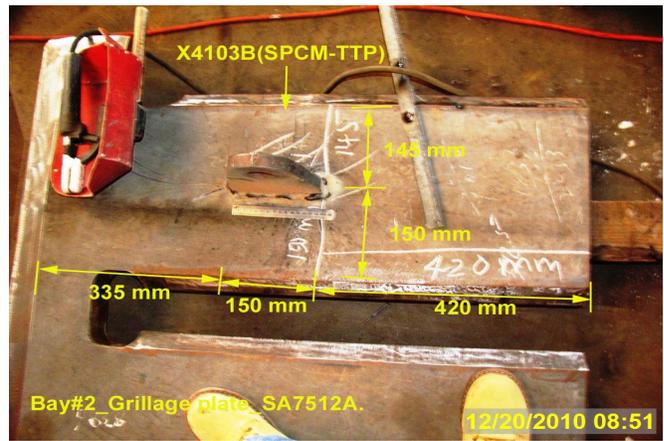
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Flux Cored Arc Welding (FCAW) Welding of weld joint identified as AH3150-002. Welder is identified as 050977. ZPMC Quality Control (QC) is identified as Mr. Wang liyang. The welding variables appeared to comply with Applicable the WPS: WPS-B-T-2231-ESAB.

SMAW Welding of weld joint identified as SP3071-001-169. Welder is identified as 058102. ZPMC Quality Control (QC) is identified as Mr. Wang liyang. The welding variables appeared to comply with Applicable the WPS: WPS-B-P-2213-TC-U4b.

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 Quality Control (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 15000422372, who represents the Office of Structural Materials for your project.

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Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
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Reviewed By:	Hall,Steven	QA Reviewer
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