

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-018376**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:** Mr. Xu Le Fung.**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 and Orthotropic Box Girder (OBG)**Summary of Items Observed:**

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

NDT:

BAY 10:

This QA Inspector performed randomly Visual Inspection and Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated a TL- 6028 (MT) report for this date. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

BK004A6-029-063, 100, 061, 076, 092, 096

BK004A8-029-063, 100, 061, 076, 092, 096

NDT Notification No-07494

BAY 10

This QA Inspector performed randomly Visual Inspection of the area previously tested and accepted by ZPMC Quality Control personnel. The member is identified as OBG Bike Path. The weld designations reviewed are as follows.

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BK004A1-026

NDT Notification No-07490

This QA Inspector observed the following work in progress:

BAY 10:

OBG Bike path, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 053869, 040533 Perform Flux Core Arc Welding (FCAW) on OBG Bike path stringer plate to deck plate. Joint identified as BK008A3-001-051, 052. ZPMC QC Identified as Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 057258, 052075 Perform Flux Core Arc Welding (FCAW) on OBG Bike path stringer plate to deck plate. Joint identified as BK008A3-001-014, 015. ZPMC QC Identified as Li Peng Fei. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 040367, Perform Flux Core Arc Welding (FCAW) on OBG Bike path. Joint identified as BK004A2-029-018. ZPMC QC Identified as Yu Zhi Lai. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-B-L1b-F.

OBG Bike path Repair Welding, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040302, 040434, Perform Flux Core Arc Welding (FCAW) on OBG Bike path side plate. Joint identified as BK004A1-032-043. ZPMC QC Identified as Lijun with temporary welding repair report. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-345-FCAW-2G (2F) Repair-1.

BAY 11:

Tower Lift 6, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 046769, 040704, Perform Flux Core Arc Welding (FCAW) on lift 6 assembly plate. Joint identified as ESD1-FDSA6-2-5, 6. ZPMC QC Identified as Shao Hai Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 205649, 040736, Perform Flux Core Arc Welding (FCAW) on lift 6 assembly plate. Joint identified as WSD1-FDSA6-4-1, 2. ZPMC QC Identified as Shao Hai Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

This QA Inspector observed ZPMC qualified welding personnel identified as 040690, Perform Flux Core Arc Welding (FCAW) on lift 6 assembly plate. Joint identified as SSD1-DPSA6-5-1. ZPMC QC Identified as Shao Hai Lang. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-B-U3c-F-2.

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OBG Bike path, FCAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 054460 Perform Flux Core Arc Welding (FCAW) on OBG Bike path plate. Joint identified as BK004A3-023-010, BK004A5-023-002. ZPMC CWI Identified as Yu Dong Ping. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2231-Tc-U4c-F.

This QA Inspector observed ZPMC qualified welding personnel identified as 040723, 054460 Perform Flux Core Arc Welding (FCAW) on OBG Bike path plate. Joint identified as BK004A6/A8-023-072, 073. ZPMC CWI Identified as Yu Dong Ping. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2132.

Lift 6, SAW process:

This QA Inspector observed ZPMC qualified welding personnel identified as 056975 Perform Submerged Arc Welding (SAW) on Lift 6 Assembly plate. Joint identified as SSD1-DPSA-6-5-1. ZPMC QC Identified as Libin. The welding parameters as measured using QC's calibrated instrument appeared to be in general compliance with WPS-B-T-2221-B-U3c-S-2.

BAY 10, Green Tagging

This QA inspector performed Visual Inspection for Green Tagging which were previously tested and accepted by ZPMC Quality Control personnel Mr. Xu Le Feng and ABF QA personnel Mr. Liu Cheng. The members are identified as OBG Bike Path BK004A-026 (Step 10). The green Tag number is identified as # 13777.

BAY 10, Green Tagging

This QA inspector performed Visual Inspection for Green Tagging which were previously tested and accepted by ZPMC Quality Control personnel Mr. Xu Le Feng and ABF QA personnel Mr. Liu Cheng. The members are identified as OBG Bike Path BK004A1-031 (Step 5). The green Tag number is identified as # 13778.

BAY 11

During Caltrans QA in process observations of the fabrication of East Tower Lift 6 Skin F, Assembly plate. ESD1-FFSA6-2, this QA discovered the following issue(s): ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager / McQuaid) The following requirements were not followed:

2. Assembly

A B C D E F G H I J K L M

X

NOTE: The above tables are relative to sections 2 ~ 6 of the NEW WELD PROCEDURE (Rager / Mc Quaid) and the corresponding paragraph letters.

The weld is identified as: ESD1-FFSA6-2-1, 2, 3, 4, 5, 6, 7, 8. The welding process used was SMAW, The area was being no preheated. The weld is as Fillet joining stiffener plate to base plate, The weld is not SPCM ESD1-FFSA6-2 is located in Bay 11. For further information, please see the attached pictures. Incident Report to be generated to this date.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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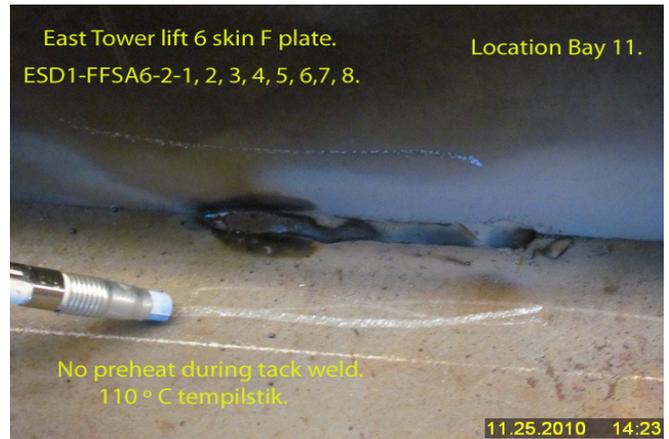
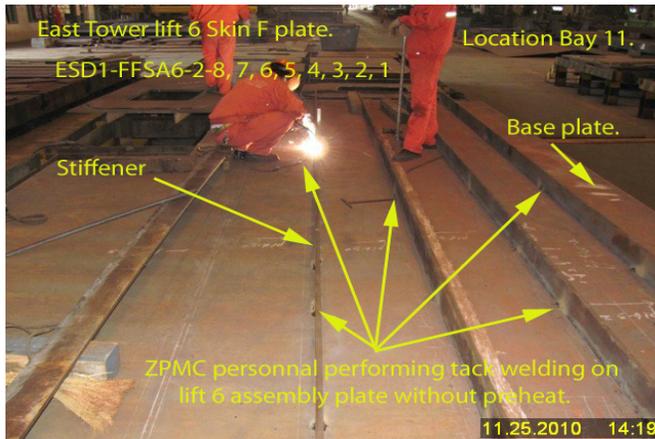
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## Summary of Conversations:

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 Thomas Ho phone : 150002048250, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Shailesh

Quality Assurance Inspector

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**Reviewed By:** Clifford,William

QA Reviewer