

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-021470**Date Inspected:** 29-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) Chanxing Island**Location:** Shanghai, China

CWI Name: Mr. AN QIANG XING
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: Yes No N/A
Approved WPS: Yes No N/A
Delayed / Cancelled: Yes No N/A

Bridge No: 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector Santhosh Ramakrishna Pillai was present during the times noted above for observations relative to fabrication work of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China.

This QA inspector randomly observed the following work:

1. INPROCESS:

Orthotropic Box Girder (OBG) at Trial Assembly Area:

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of Complete Joint Penetration (CJP) welds joining the edge plate to side plate hold back weld joint located on 11EE+12AE at bike path side. The weld is designated as CA094-001(11EE) & CA3001-001(12AE). The welder is identified as 044515. ZPMC QC Mr. AN QING XING was onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2214-TC-U4b-FCM-1.

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of Complete Joint Penetration (CJP) welds joining the edge plate to deck plate hold back weld joint located on 11EE+12AE at bike path side. The weld is designated as CA094-002(11EE) & CA3001-002(12AE). The welder is identified as 040320. ZPMC QC Mr.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

WANG LI YANG was onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2214-TC-U4b-FCM-1.

ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of Complete Joint Penetration (CJP) welds joining the bottom plate to side plate hold back weld joint located on east side of 11EE at bike path side. The weld is designated as SEG074A-012. The welder is identified as 047353. ZPMC QC Mr. LIU HUA JIE was onsite monitoring the welding variables. The inprocess FCAW appears to be progressing in compliance with WPS-B-T-2231-ESAB.

ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of Complete Joint Penetration (CJP) welds joining the traveler rail bracket weld joint located on 11BW. The weld is designated as TR2A-PP098-002. The welder is identified as 053486. ZPMC QC Mr. ZHU ZHONG HAI was onsite monitoring the welding variables. The inprocess FCAW appears to be progressing in compliance with WPS-B-T-2233-TC-U4c-F.

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of tack welds for fit-up the I-Rib to side plate hold back weld joint located on 11EW+12AW at cross beam side. ZPMC QC Mr. SHI LIE was onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2112-FCM-1.

ZPMC personnel performing Edge preparation of bottom plate for bottom plate to bottom plate transverse splice weld joint located on east side of 12AE. During Visual Inspection of the above mention weld joint damage found on base metal of bottom plate. The depth of the damage is approximately measured 10 mm. The Information of the problem pass over the ZPMC CWI Mr. LIU HUA JIE for further rectification with approved CWR. See attached picture for further detail.

2. NDT:

Magnetic Particle Testing (MT):

MT carried out as per the ZPMC submitted Notification No 07550 Item No 3.

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area that has been previously tested and accepted by ZPMC MT technicians. This QA Inspector generated a TL-6028 MT report on this date. The weld designation numbers is as follows: SEG069B-029, SEG069C-007, SEG071B-044, 057, 064, 041, 006, SEG071C-044, 065, 041, 057, 006.

Magnetic Particle Testing (MT):

MT not done for the ZPMC submitted Notification No 07550 Item No 4 & 5, due to the welding not complete approximately 15mm in length. ZPMC Quality Assurance (QA) cancelled the notification.

Ultrasonic Testing (UT) (A, B, C and D-Scan):

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

UT carried out as per the ABF submitted UT Notification No 11282010-1.

This QA Inspector performed Ultrasonic testing (UT) 10 % of the area that has been previously tested and accepted by ABF Quality control personnel. This QA inspector generated a UT (TL-6027) report on this date. The members are identified as corner joint between bottom plate to side plate weld joint located on CB-17 at west side. According to rejection criteria of "D" Scan procedure that Caltrans QA did not find any Rejected indication at scanning area. The Weld Designation is as follows: CB3001A-017-017.

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



Summary of Conversations:

No relevant 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 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Pillai,Santosh

Quality Assurance Inspector

Reviewed By: Miller,Mark

QA Reviewer