

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-018154**Date Inspected:** 15-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. Li zhi jiang**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- 2

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 07356.

Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Vertical plate weld Components. Total number of welds UT Tested: 15 No's. The weld designations are review as follows:

1. VP3014-001-007~009,017~019,028~030,039~041,050~052.

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint LD3048-001-104. Welder is identified as 058245. ZPMC Quality

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Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4b-F.

FCAW of weld joint LD3048-001-024. Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC- U4b-F.

FCAW of weld joint FB3343-001-216. Welder is identified as 067942. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC- U4b-F.

FCAW of weld joint FB3343-001-199. Welder is identified as 045227. ZPMC Quality Control (QC) is identified as Mr. Zhu jun. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC- U4b-F. During the Caltrans QA in-process observations of the fabrication of Longitudinal Diaphragm LD3048A, this QA observed ZPMC personnel performing hot bending on the longitudinal shear plate manway stiffener identified as X4997A. The material was heated to a bright red/yellow condition. This QA Inspector observed that an 1100°C Tempilstik melted when struck against the heated area of the material. A temperature indicating crayon, digital temperature measurement gauge, or other similar means of monitoring the temperature was not utilized by ZPMC QC and the actual maximum attained temperature was not measured. The length of the heated area is approximately 200 mm. The Y location is approximately 520 mm and 1200 mm as measured from each end of the stiffener. The stiffener length is approximately 1920 mm. The LD stiffener plate material thickness is 14 mm.

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report and attached photos.

BAY- 3

FCAW Repair welding of weld joint FB3286-001-388. Welder is identified as 067876. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-2G (2F)-Repair-1. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR16801. This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT-17512.

FCAW Repair welding of weld joint FB3286-001-392. Welder is identified as 067949. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-345-FCAW-2G (2F)-Repair-1. The repair welding was being performed as per the Welding Repair Report (WRR) No: B-WR16802. This weld was rejected by ZPMC UT Technicians and recorded on UT report No: B787-UT-17512.

FCAW of weld joint LD3041-001-045. Welder is identified as 055564. ZPMC Quality Control (QC) is identified as Mr. Zhan hai feng. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4b-F.

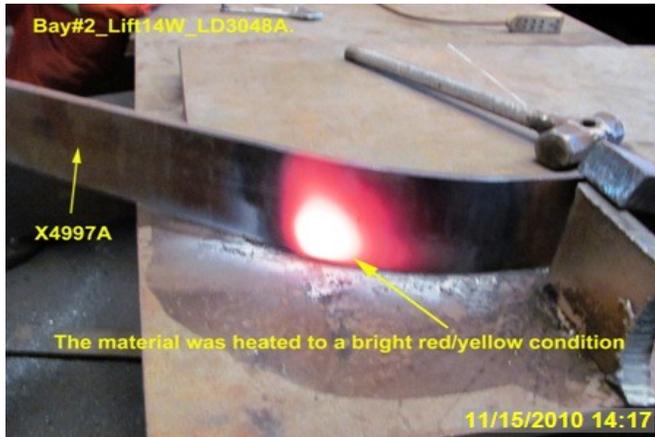
This QA Inspector performed photo documentation on Lift 14 Hinge plates are identified as FB3286A, FB3273A, FB3272A, FB3328B, FB3327A, FB3343A, SA3325A, SA3324A, SA3409A and SA3410A located in sub assembly bay 2 and 3. These photos has been sent to QA lead Inspector and Structural Material Representative (SMR) by

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mail.

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.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Hall,Steven

QA Reviewer