

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-018345**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 Feng**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 / OBG**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Baskar Govindarajan, was present during the times noted above for observations relative to the work being performed.

Bay #11

This QA Inspector observed the following work in progress

Tower

Flux Cored Arc Welding (FCAW):

Weld joint # 5 located on Lift 6 Skin plate to stiffener ESD1-FDSA6 -2. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified as Shao Hai Long. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 6 located on Lift 6 Skin plate to stiffener ESD1-FDSA6 -2. Welder is identified as 040704. ZPMC Quality Control (QC) Inspector is identified as Shao Hai Long. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 1 located on Lift 6 Skin plate to stiffener WSD1-FDSA6 -5. Welder is identified as 040690. ZPMC Quality Control (QC) Inspector is identified as Shao Hai Long. The welding variables recorded by QC appeared to

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comply with the WPS – B – T – 2231 –B –U3C –F -2.

ORTHOTROPIC BOX GIRDER (OBG)

Flux Cored Arc Welding (FCAW):

Weld joint # 002 located on Bike path BK004A5 - 023. Welder is identified as 050060. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231-TC-U4C-F.

Shielded Metal Arc Welding (SMAW):

Weld joint # 058, 059 located on Bike path BK 004A2 -023. Welder is identified as 040655. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS –B – P - 2113.

Weld joint # 073, 074 located on Bike path BK 004A2 -023. Welder is identified as 040655. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS –B – P - 2113.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During Caltrans QA in process observations of the fabrication of West tower, Lift 6 ,Skin D to Stiffener welding, this QA discovered the following issue:

ZPMC welding personnel did not appear to be following the NEW WELD PROCEDURE (Rager / McQuaid)

The following requirements were not followed:

Preheat not maintained in following Joint.

The weld is identified as WSD1- FDSA6- 4 - 5

The welding process used was FCAW

The area was being preheated using Electric strip heaters

The weld is a Fillet joining Skin D to Stiffener

The weld is not SPCM

Component/Member is located in Bay no. 11

Applicable reference:

Applicable reference:

NEW WELD PROCEDURE (Rager / McQuaid)

2. Assembly.

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F. Preheat shall be applied in such a manner to provide a minimum temperature in the area of the weld of 165°C.

3. Preparation for Welding.

M. Preheat shall utilize the use of electric heaters and blankets and be applied in such a manner to provide a minimum temperature in the area of the weld of 140°C at all times until the weld joint is post weld thermal treated. (This includes applying preheat for CJP welds made from both sides and backgouged.)

4. Welding.

E. Preheat shall be maintained in accordance with Section 3.k.~ 3.n. of this procedure.

This QA notified ZPMC QC identified as Mr. Shao Hai Long and ABF inspector identified as Mr. Xin Xiao Guang of the above issue and that an incident report will be generated.

Bay #10

ORTHOTROPIC BOX GIRDER (OBG)

Flux Cored Arc Welding (FCAW):

Weld joint # 016, 017 located on Bike path BK008 -001. Welder is identified as 053869. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Shielded Metal Arc Welding (SMAW):

Repair welding of Weld joint # 016, located on Bike path BK 004A2 -019. Welder is identified as 040690. ZPMC Quality Control (QC) Inspector is identified as Li Peng Fei. The welding variables recorded by QC appeared to comply with the WPS –345 –SMAW -1G (1F) - Repair.

Magnetic Particle Testing (MT)

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 007496.

This QA inspector performed (MT) of approximately 15% of an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA Inspector generated a TL 6028 MT report for this date. The member is identified as OBG Bike path components. The weld designations reviewed are as follows:

BK004A6 -026 – Jt. nos. -006, 154, 029

BK004A8 -026 – Jt. nos. -041, 035

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For further information see below pictures:-

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



Summary of Conversations:

No relevant Conversations.

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 Hu (15002048250), who represents the Office of Structural Materials for your project.

Inspected By:	Baskar, Govindarajan	Quality Assurance Inspector
Reviewed By:	Clifford, William	QA Reviewer
