DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-005864
Date Inspected: 31-Mar-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	ZPMC and ABF	**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: SAS tower

Summary of Items Observed:

Bay #10 South and North Tower Shop

South tower lift #1:- Caltrans QA inspector performed final VT inspection on the fillet welds of corner diagonal stiffener. The fillet weld connected to back side of corner diagonal stiffener and skin plate B and C. The corner diagonal stiffener located at elevation 9m, 13m, 15m, 18m, 23m, 28m, 33, 38, 43 and 47.6m. All the fillet welds for VT inspection have been accepted by ZPMC and ABF QC prior Caltrans QA inspection. Base on Caltrans inspection, the fillet welds on stiffener to skin plates appeared to be in compliance with requirements of AWS D1. 5 2002 and Caltrans contract documents.

South tower lift#1:- Caltrans QA Inspector observed five welders performed FCAW process on CJP weld for corner diagonal stiffener that connected skin plate C to D. The welding located at elevation 9m, 13m, 15m, 18m and 38m. The minimum preheat and maximum interpass temperature requirements for FCAW CJP weld are 110C degree and 230 C degree. The FCAW was monitored and recorded by ZPMC and ABF QC inspector. Based on Caltrans QAI observations, no discrepancies were noted.

South tower lift #1:- Caltrans QA inspector performed final VT and MT inspection on the connection plate welds between the stiffeners of south tower lift #1. The fillet welds attached to connected plates and stiffeners. Those welds located elevation 3.125m to 9m of skin plate B and C. All the welds for VT and MT inspection have been accepted by ZPMC and ABF QC prior Caltrans QA inspection. Base on Caltrans inspection, the fillet welds on stiffener to skin plates appeared to be in compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

South tower lift #2:- Caltrans QA inspector performed final VT and MT inspection on the fit lug welds and diaphragm welds of skin plate A and B for south tower lift #2. The fit lug welds and diaphragm located at elevation 53m to 80.75m. All the welds for VT and MT inspection have been accepted by ZPMC and ABF QC

prior Caltrans QA inspection. Base on Caltrans inspection, the fit lug welds and diaphragm welds appeared to be in compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

South tower lift #3:- Caltrans QA inspector performed final MT inspection on the CJP weld of skin plate B for south tower lift #3. The CJP weld number #SSD1-FBSA3-1A/C-10/11/14/15/19/20/23/24. Base on Caltrans inspection, the skin plate CJP weld appeared to be in compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

South tower lift #3:- Caltrans QA inspector performed final MT inspection on the PJP and CJP weld of skin plate C for south tower lift #3. The PJP and CJP weld number #SSD1-FBSA3-1B/C-30, 33, 36, 39, 15, 18, 21, 24, 31, 34, 37, 40, 16, 19, 22, 25, 29A/B-32A, 35A, 38A, 14A, 17A, 20A and 23A. All the welds have been tested on side A only. The B side is not able to MT test until the plate turn over. Base on Caltrans inspection, the skin plate PJP and CJP weld appeared to be in compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

South tower lift #3:- Caltrans QA inspector performed final MT inspection on the CJP weld of shear plate for skin plate C. The CJP weld number #ED1-A27A/E-1A, 2A. All the welds have been tested on side A only. The B side is not able to MT test until the plate turn over. Base on Caltrans inspection, the skin plate CJP weld appeared to be in compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

Bay #11 East and West Tower Shop

East Tower Lift #2:-Caltrans QA Inspector observed three ZPMC workers performed grinding process on the fig lug welds and diaphragm welds. The fig lug welds and diaphragm welds are located at elevation 62m, 74m and 77m interior diaphragm of east tower lift #2. The grinding process is removing the weld profiles that have been rejected by VT inspection. Base on Caltrans observation, no discrepancies were noted.

West tower lift#1:- Caltrans QA Inspector observed two welders performed FCAW process on inner corner longitudinal seam weld that connected skin plate A to E. The welding located at elevation 18m, 28m and 38m. The minimum preheat and maximum interpass temperature requirements for SMAW longitudinal seam weld are 110C degree and 230 C degree. The FCAW was monitored and recorded by ZPMC and ABF QC inspector. Based on Caltrans QAI observations, no discrepancies were noted.

West Tower Lift #1:-Caltrans QA Inspector observed one welder performed SMAW root pass process on interior diaphragm that attached to skin plate C. The interior diaphragm located at elevation 40.6m. The SMAW root pass welding was monitored and recorded by ZPMC and ABF QC inspector. Based on Caltrans QAI observations, no discrepancies were noted.

Summary of Conversations:

As noted within the report above.

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 , who represents the Office of Structural Materials for your project.

Inspected By:	Pau,Wai	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer