

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003801**Date Inspected:** 19-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****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:** OBG Assembly**Summary of Items Observed:**

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following: The weather today is 31C, clear with winds at 2-3 kph.

Orthotropic Box Girder (OBG) Fabrication

QA arrived at OBG Bay 1 at 0700 hrs. for the purpose of witnessing deck panel production in accordance with WPS B T 2342 U1 (Urib) -3 combination GMAW/ SAW on closed rib deck plates. Gantry number 2 is being utilized for these panels conducted on this date. As well this production will be directly associated with Deck Plates DP 087-001 & DP336-001. Tacking was performed prior to QA arrival however Magnetic Particle Testing (MT) for the associated tack welds was closely observed by QA and performed by ZPMC qualified MT Level II Cai Xin. Nine locations were determined to exhibit relevant linear indications and the locations were as follows; Weld 1 tack number 5, Weld 2 tack 3, Weld 3 tacks 1 & 3, Weld 4 tacks 1,6 & 9, weld 6 tack 1. As well QA performed 20% MT on tack welds directly associated with DP-087-001. QA also witnessed the subsequent grinding of these 9 indications as well as the follow up/ post repair MT by ZPMC NDT representative Cai Xin. QA did observe that all three sections equaling to a total of six closed rib joints on one base "Deck" plate had intimate contact between the closed rib plates and the associated base plate material.

QA observed ZPMC QC representative Sun Wei (CWI for this evolution) & AB/F QC Chang Bao Qian was

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available for this operation. As well the following welders were available and assigned to the corresponding horizontal welding positions;

Welder ID for Gantry Weld 1- Zhang Li Ping 201840

Welder ID for Gantry Weld 2- Zhao Cheng Shuan 059400

Welder ID for Gantry Weld 3- Xiang Huang Feng 059416

Welder ID for Gantry Weld 4- Jiang Shaung Chen 201788

Welder ID for Gantry Weld 5- Xiang Huang Feng 059416

Welder ID for Gantry Weld 6- Jiang Shaung Chen 201788

Welder ID for Gantry Weld 7- Wang Xiao Rong 059445

Welder ID for Gantry Weld 8- Song Yin Shu 059421

As welding began the measured parameters were as follows;

GMAW

	AMPS	VOLTS	Travel Speed
1.	387	31.4	530 mm
2.	374	30.8	Per Minute
3.	371	30.1	Constant
4.	386	30.7	
5.	365	30.4	
6.	372	30.5	
7.	371	31.3	
8.	359	31.8	

The above mentioned items, as observed by QA appear to be in conformance with the contract documents with the exception of the weld quality issues.

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Summary of Conversations:

No relevant conversations 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 Ady Velasco 138-1694-2685, who represents the Office of Structural Materials for your project.

Inspected By:	Vatcher,Robert	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
