

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001080**Date Inspected:** 07-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhang Zhong**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 floor beam/Plate material**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Bay 7

OBG-Floor Beam

ZPMC NDT (UT):

QA Inspector Brannon randomly observed ZPMC Ultrasonic Testing Technician's Mr. Li Li Ming performing shear wave using a 70° transducer and Mr. Yong Jun performing Lamination Scan with 2.5mhz transducer on the following diaphragms join welds: FB013-01-002 x95x95B to x96-x96B, FB013-02-002 x95x95D to x96-x96B-2, FB013-03-002 x95x95B to x96-x96B-1, FB004-03-820 x50x50D to x5-x5B-2, FB004-01-020 x50x50D to x5-x5-3, FB004-02-002 x50x50D to x5-x5B-1, FB013-04-020 x95x95D to x96-x96B-2, FB004-04-002 x50x50D to x5-x5B-4, FB013-01-020 x95x95D to x96-x96B-1, FB013-02-002 x95x95B to x96-x96B-2, FB013-03-026 x95x95D to x96-x96B-1, FB004-03-002 x50x50B to x5-x5B-2, FB004-01-002 x50x50B to x5-x5B-3, FB004-02-020 x50x50B to x5-x5B-1, FB013-04-002 x95x95B to x96-x96B-2 and FB004-04-020 x50x50D to x5-x5B-4. ZPMC Quality Control Mr. Xu Jun stated to QA Inspector Brannon that Mr. Li Li Ming and Mr. Yong Jun did not observe any indications.

OBG - Floor Beam

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Jin Chang Mao ID #058551 groove welding root pass joining weld joint #'s FB026-01-108 x20B to x20A, FB026-02-108 x20B to x20A,

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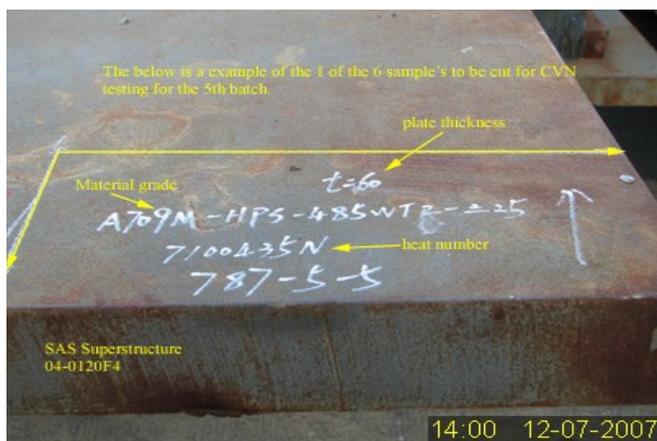
FB022-02-108 x20B to x20C, FB021-01-108 x19B to x19C, FB025-02-108 x19B to x19A, FB026-01-108 x19B to x19A and FB021-02-108 x19C to x19B side a. Mr. Jin was observed welding in the 1G (flat) position utilizing a Flux corded arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic. QA Inspector Brannon observed the ZPMC QC CWI Inspector Zhang Zhong verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Zhang Zhong to be: preheat temperature of 60°C and welding parameters amps of 269/255, volts of 29/29, a travel speed of 516/518 mm/min and a gas flow of 22L/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2231-B-U2-F-1 Revision 0.

Plate Material Storage Yard

QA Inspector Brannon went to the plate material storage yard accompanied by ZPMC Quality Control Mr. Sun Bo to observe marking and cutting of 6 samples for Charpy V-Notch testing fifth batch. QA Inspector verified heat numbers, size, length and width against the material test reports. The samples were identified as the following:

- (1) Heat number 7300111N, 60x2400x11500, Gr. A709M-345T2-Z
- (2) Heat number 7100485N, 60x2600x9000, Gr. A709M-345T2-Z
- (3) Heat number 7101271N, 45x2500x10000, Gr. A709M-345T2-Z
- (4) Heat number 7300120N, 60x2100x10000, Gr. A709M-345T2-Z
- (5) Heat number 7100435N, 60x2700x9000, Gr. A709M-HPS-485WT2-Z25
- (6) Heat number 7100441N, 75x3000x11000, Gr. A709M-HPS-485WT2-Z25

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

As stated within the report.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Brannon, Sherri	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer
