

**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-000993**Date Inspected:** 05-Dec-2007**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:** See below**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/PQRHP2007520**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-Floorbeams

QA Inspector Brannon randomly observed ZPMC qualified welder Mrs. Huang Xin Lan ID #044780 groove welding joining weld joint #'s FB025-01-1023 and FB008-01-023 side a. Mrs. Huang was observed welding in the 1G (flat) position utilizing a submerged arc welding (SAW) process with a 4.8mm diameter electrode, filler metal brand EM12K, class JW-3, machine. QA Inspector Brannon observed the ZPMC QC CWI Inspector Zheng 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 Zheng Zhong to be: preheat temperature of 60°C and welding parameters amps of 530, volts of 31 and a travel speed of 440 mm/min. Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2221-B-L2c-s-1.

## PQR ID#HP2007520

Later in the shift QA Inspector Brannon periodically observed ZPMC welder Mr. Zhu hai Ping, welding fill passes for Procedure Qualification Record Test (PQR) #HP-2007 520. Base metal was designated as Shear Link Grade 345 (Heat # 7202167N) and a 28mm thickness. Mr. Ping was observed welding in the 1G (flat), position utilizing a shielded metal arc welding (SMAW) process using a 4.8mm diameter electrode, classification Excalibur 9018M,

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

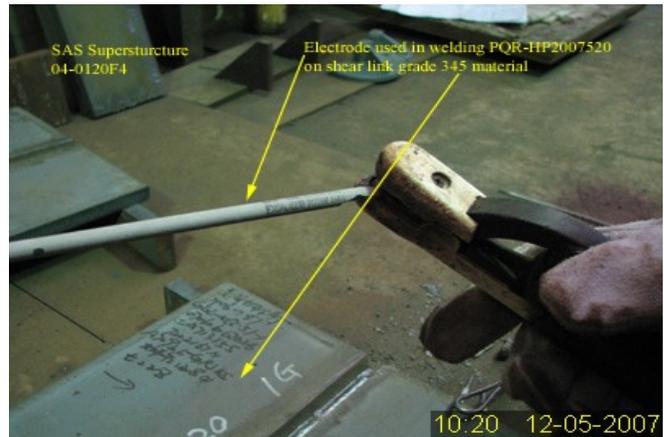
---

Brand:

E9018M-H4R, manual process. Mr. Ping appeared to be using proper inter-pass cleaning methods by using manual

steel wire brush, and manual chisel and hammer. QA Inspector observed preheat and welding parameters measured by the ZPMC QC Huang Wei. Also, observing was ABF Mr. Danny McDonald in the am and ABF Mr. Craig Knops in the pm. QA Inspector Brannon witnessed passes 1 through 11 (layer #7). The QA Inspector performed random verifications of the welding parameters for a total of 11 passes. QA Inspector Brannon found that the welding parameters taken by QC Inspector Mr. Huang Wei appeared to be accurate and in accordance with the contract documents and AWS D1.5 2002 Qualification Section 5.13.

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



## Summary of Conversations:

No relevant conversations on 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Brannon, Sherri

Quality Assurance Inspector

---

---

# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

**Reviewed By:** Cuellar,Robert

QA Reviewer