

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-002145**Date Inspected:** 26-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 745**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1410**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen xi**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**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mahlon Lindenmuth, 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:

Caltrans QA Inspector, Lindenmuth, monitored the Production Monitoring Tests (PMT) and production welding for the OBG Deck Panels U-rib welding.

The weld joint is a single bevel Partial Joint Penetration (PJP) weld that joins the U-rib to the deck plate. The Production Monitoring Test (PMT) is performed prior to the production of the Deck Panels (DP).

PMT #1 consists of (3) ribs totaling (6) weld joints(wj), numbered wj1 thru wj6. Welding was performed on Gantry 1 and represents production for Deck Panel (DP) DP-329-001.

The following is information that pertains to the welding of the PMT #1. Listed below are the WPS, welding essential variables, welders and weld joint number. Followed by a short summary:

*WPS: WPS-B-T-2342 (Dual Process GMAW root pass SAW fill and cover pass)

Welding variables minimum maximum range recorded is as follows:

GMAW-Volts:29.9-30.9 Amperage:366-375 Travel Speed:530mm/m

SAW-Volts:24.6-25.5 Amperage:672-680 Travel Speed:536mm/m

Base Metal/Ambient Temperature: 19/20 degrees C

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

*Weld joint#(wj#)/welder(ID):

wj1-Chen jie(059468) wj2-Zhang hui(059403)
wj3-Liung huang feng(059416) wj4-Feng huong(059371)
wj5-Gao xing dong(054361) wj6-Jiang ting guang(062265)

ZPMC Quality Control (QC) performed visual inspection of the GMAW weld pass and the subsequent SAW weld pass. ZPMC QC noted both welds as visually compliant. ZPMC QC also performed Ultrasonic Testing of all of the weld joints and noted them as compliant. Caltrans QA Inspector,Lindenmuth, visually reviewed the GMAW weld pass and the SAW weld pass and noted them as compliant with contract documents. Upon completion of the visual review Caltran QA Inspector,Lindnemuth, marked areas of the PMT that will have macro-etch samples removed.

Production Welding of DP329-001

The following is information that pertains to the welding of Deck Panel DP329-001 (4 ribs). Listed below are the WPS,welding essential variables,welders and weld joint number. Followed by a short summary:

*WPS: WPS-B-T-2342 (Dual Process GMAW root pass SAW fill and cover pass)

Welding variables minimum maximum range recorded is as follows:

GMAW-Volts:30-30.8 Amperage:355-375 Travel Speed:530mmpm

SAW-No SAW welding performed

*Weld joint#(wj#)/welder(ID)/U-rib#:

wj1-Chen jie(059468) wj2-Zhang hui(059403) U-rib 221
wj3-Jien feng(059416) wj4-Feng huong(059371) U-rib 232
wj5-Jien feng(059416) wj6-Feng huong(059371) U-rib 229
wj7-Gao xing dong(054361) wj8-Jiang ting guang(062265) U-rib 230

The GMAW weld passes have been completed on all eight weld joints. SAW welding had not begun on the U-ribs during the AM shift.

Gantry 2 was idle on the AM shift.

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

Inspected By:	Lindenmuth,Mahlon	Quality Assurance Inspector
----------------------	-------------------	-----------------------------

Reviewed By:	Cuellar,Robert	QA Reviewer
---------------------	----------------	-------------