

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002445**Date Inspected:** 06-May-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)**Location:** Changxing Island**CWI Name:** Xie Yan**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:** SAW welding**Summary of Items Observed:**

SAW welding process on skin plate (Tower bay#1): Caltrans QAI observed three Zhenhua Port Machinery Co (ZPMC) welding operators performed semi-automatic SAW welding on the splice weld of ASTM 709 345 skin plate numbered P32-P351 WITH 45mm wall, weld# SSD1-SA173A/K-16A, skin plate numbered P327A-P327B with 45mm wall thick, weld# SSD1-SA159G/J-15A/15B and skin plate numbered P968-SA90 with 45mm wall thick, weld# SS01-SA40A/E-178/DA. The weld was designed double -V-groove weld and weld in flat position (1G) with proper 4.8mm diameter wire feed electrode JW3 and flux/J1-B, made by China Company and completed with approximate five pass. The parameters used for SAW welding of splice weld was conducted in accordance with Caltrans approved WPS-B-T-2221-B-U3. The semi-automatic SAW welding was monitored and recorded by CWI Xie Yan. Based on Caltrans QAI observation, no discrepancies were noted.

Observed Ultrasonic Testing (UT) on butt joint weld of skin plate (Tower bay#2): Caltrans QA observed Zhenhua Port Machinery Co (ZPMC) two NDT level II technicians performed angle beam UT on butt joint weld on skin plate weld # SSD1-SA40 A/E-17B, SSD1-SA18 A/E-1B and SSD1-SA173 A/K-16A. The material of skin plate is ASTM 709 345 wall thickness from 45mm to 75mm and the test surface has been cleaned. A250mm range reflection has calibrated on "A scan" digital display instrument Parametric model Epoch XT, an angle beam search unit, is an angle wedge 70 degrees applied a source of shear waves, and passes through base weld for the detection of discontinuities. The distance and sensitivity of straight beam and angle beam are calibrated with the International Institute of welding (IIW) ultrasonic reference block. The UT test operated and recorded by ZPMC technicians appeared to be in general compliance with requirements of AWS Structural Welding Code D1.5 2002.

Summary of Conversations:

As Note within the report above.

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

Inspected By:	Pau, Wai	Quality Assurance Inspector
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Reviewed By:	Carreon, Albert	QA Reviewer
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