

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-002857**Date Inspected:** 07-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 100**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**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:** Skin plates**Summary of Items Observed:**

The name of ABF Certified Welding Inspector (CWI) are Mr. Wang Cheng Jun, Mr. Wei Jian Bo, Miss. Xie Yan and Mr. Yang Yi Heng

Flux Cored Arc Welding (FCAW) welding process on longitudinal stiffener plate (Tower Bay#2): Caltrans QAI observed a welder was performing FCAW process on splice weld of longitudinal stiffener for numbered P328 to P352A with 65mm wall thickness, weld# ESD1-SA107D/J-1A. The parameters used for FCAW process of splice welds were conducted in accordance with Caltrans approved WPS-B-T-2231-B-U3-F. The electrode being used is super cored 71.H with 0.14mm diameter made by China Company. The FCAW process was monitored and recorded by ZPMC QC Inspector and ABF CWI. Based on Caltrans observation, no discrepancies were noted.

Submerged Arc Welding (SAW) process on skin plate (Tower Bay#1 and Bay#2): Caltrans QAI observed ZPMC welding operators performed semi-automatic SAW on the splice weld of ASTM 709 345 skin plate numbered P353 to P262 to P314 to SA17 with 45mm to 65mm wall thickness, weld# SSD1-SA17G/G-59A, SSD1-SA17G/G-54, SSD1-SA17F/G-6A and SSD1-SA17F/G-7.(Bay#1), skin plate P39 to P327A with 65mm wall thickness weld# SSD1-SA159E/J-19B (Bay#1), skin plate P503A to P503B with 65mm wall thickness weld# SSD1-SA16A/G-44B (Bay#1) and skin plate numbered P591 to P748 with 45mm wall thickness, weld# ESD1-SA80A/E-45A (Bay#2). The weld designed is a double -V-groove with welding conducted in the 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 was monitored and recorded by ZPMC QC and ABF Certified Welding Inspector (CWI). Based on Caltrans QAI observations, no discrepancies were noted.

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Magnetic particle testing (MT) on splice welds (Tower bay#1 and bay #2): Caltrans QAI performed QA MT testing on stiffener weld of side plate and splice weld of skin plate. The test weld numbered # SP090-001-079~086/003~010, SP085-001-007~086/001~010, SP090-001-032~041, SP090-001-077/001, SP090-001-078/002 (stiffener weld), SSD1-SA180B/E-23A, SSD1-SA180B/E-24A, SSD1-SA180B/E-1 and SSD1-SA17A/G-18A (splice weld). The grease, rust, scale and other moisture have been removed by ZPMC workers on both side 200mm of test weld areas prior MT testing. The power source of MT testing is used electromagnetic yoke with Alternating Current (AC) made by Magnaflux. The detection media is used dry red ferromagnetic particles. The QA MT testing of weld areas appeared to be in compliance with the requirements of AWS D1.5 (2002) and Caltrans contract documents.

Summary of Conversations:

As Note within the report above.

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:	Cochran,Jim	QA Reviewer
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