

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-001438**Date Inspected:** 02-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Wu Ming Kai	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 & PQR #HP2007521-1	

Summary of Items Observed:

Caltrans Quality Assurance Inspector Gabriel Quintana (QA Inspector) arrived at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to observe fabrication and Quality Control Inspectors (QC Inspectors) perform their duties and responsibilities as specified in the contract documents, approved plans, fabrications documents and Special Provisions for this project. While on site the QA Inspector observed the following:

Bay 3- QA Inspector randomly observed ZPMC qualified welder He Yumei Identification (ID) #048625, utilizing the Flux Core Arc Welding (FCAW) process per the approved welding procedure WPS-B-T-2132-2 while performing tack welding on Side Plate SP072 weld joints SP072-01-017/018 to plate PL106A. QA Inspector observed ZPMC Certified Weld Inspector (CWI) Wu Ming Kai monitoring welding and preheating parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 280 amps, welding voltage 28 volts and preheat temperature at 75°Celsius. The weld parameters appeared to comply with contract requirements.

Bay 3- QA Inspector randomly observed ZPMC qualified welder Wei Dashuni ID #051246 performing tack welding of Side Plate SP17 at weld joint SP017-01-016/017 to plate PL76A. QA Inspector observed that preheating and welding current was monitored by QC Inspector Wu Ming Kai per the approved FCAW procedure WPS-B-T-2132-2. QA Inspector observed welding parameters of 278 amps and 29 volts were used during the tack welding. Welding and welding parameters observed by QA Inspector appear to be in general compliance with the approved WPS and contract requirements.

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Bay 3- QA Inspector randomly observed ZPMC qualified welder Sun Ti Yun ID #054459 performing tack welding of Side Plate SP17 at weld joint SP017-01-022/023 to plate PL76B. QA Inspector observed that preheating and welding current was monitored by QC Inspector WuMing Kai per the approved FCAW procedure WPS-B-T-2132-2. QA Inspector observed welding parameters of 274 amps and 28.5 volts were used during the tack welding. Welding and welding parameters observed by QA Inspector appear to be in general compliance with the approved WPS and contract requirements.

Bay 7- QA Inspector randomly observed ZPMC welder Wang Min ID #048296 performing the Submerged Arc Welding (SAW) process of an interpass weld of joint FB025-02-078 of Floor Beam Sub Assembly FB25. QC Inspector Hu Wei Qing is present during the welding and observed monitoring of welding parameters per the approved procedure WPS-B-T-2221-B-L2c-S-1. The QA Inspector also randomly monitored weld parameters and recorded them as follows: welding amperage 540 amps, welding voltage 29 volts with a travel speed of 430 millimeters (mm) per minute. All observations by the QA Inspector appear to comply with the WPS and the contract requirements.

PQR ID #HP2007521-1 QA Inspector observed ZPMC welder Zhu Haiping ID #066424 perform fillet welding for Procedure Qualification Record Test (PQR) #HP2007521-1. Base metal is designated as Shear Link Grade 345, Heat #7202167N and is 28mm thick. Welder is observed welding in the 3F position utilizing the SMAW process. Electrode used for the PQR is described as the following: 4.0mm diameter electrode, Classification E7018-1, Brand THJ506Fe-1, Specification AWS A5.1. QA Inspector observed and ZPMC QC Inspector Huang Wei monitor welding parameters per the preliminary WPS. QA Inspector observed interpass cleaning methods by using manual steel wire brush and manual hammer with a chisel. QA Inspector performed random verifications of the welding and parameters for a total of three passes and assigned the completed PQR a Caltrans Lot #L17-001-08. QA Inspector observed that the welding parameters taken by QC Inspector appear to be accurate and in accordance with the contract documents and AWS D1.5 (2002), Qualification Section 5.10 and 5.13. Craig Knops of ABF is present to observe the PQR.



