

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-002095**Date Inspected:** 07-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1545**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 100**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Zhu Zhong Hai, Jiang Jun Lin	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:	Orthotropic Box Girder/Tower		

Summary of Items Observed:

On this date, Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) Inspector Edward Leach was present to randomly observe and document the welding and Quality Control (QC) functions performed by ZPMC personnel relative to the fabrication of this project. While on site, the QA Inspector noted the following work.

Heavy Load Shop/Tower Skin Panels

The QA Inspector assisted QA Inspector Eric Prue with random observations of in-process sub-merged arc welding (SAW) being performed by ZPMC welding personnel for weld splices on the tower skin plate panels.

The QA Inspector observed the welding was being performed at three locations on 60mm and 90mm thick A709M grade 345F material. At the time of this observation the QA Inspector also noted that subsequent filler passes were being deposited at the various locations. The QA Inspector was also informed by ZPMC QC personnel Zhu Zhong Hai that welding procedure specification (WPS)-B-T-2221-B-U3C-5 is being used at these locations. The QA Inspector noted a copy of this WPS was posted in the shop. Based on the observations above it appeared that the work in progress was in general compliance with the contract specifications.

OBG Shop

The QA Inspector assisted QA Inspector Eric Prue with random observations at this location and was provided with information by Mr. Prue with regard to the fabrication taking place in this shop. At the time of observation, ZPMC welding personnel identification (ID) 067876 was performing splice welding on bottom plate panel segment piece mark identification SEG-014A4-004 using the Flux Cored Arc Welding (FCAW) process in the flat position. The welding at this time was being performed manually. The QA Inspector noted 1.4mm diameter E71T-1 wire electrode in use for this application and the material was identified as A709M, Gr.345F, 20mm in

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thickness. The QA Inspector performed a random verification of the welding current and voltage observing approximately 280 amperes and 28.2 volts. The QA Inspector was informed by ZPMC QC personnel Jiang Jun Lin that the welding is being performed to the requirements of WPS-B-T-223(2)1T. The QA Inspector referenced a copy of this procedure and noted that the welding parameters mentioned above appeared to comply with this procedure. The QA Inspector also reviewed the information on the daily welding inspection report provided by ZPMC QC personnel Jiang Jun Lin. At the time of this observation it appeared that the work in progress was in general compliance with the contract specifications.

Bay 7

The QA Inspector assisted QA Inspector Eric Prue with Magnetic Particle Testing (MT) on side panels 60 and 15. The MT was performed by Mr. Prue for approximately 10% of the T-rib partial joint penetration (PJP) welds. Mr. Prue briefed the QA Inspector about the MT requirements for this assembly.

The following pictures below detail the work in progress in the tower and OBG shops.



Summary of Conversations:

As noted above in report.

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: Leach,Ed

Quality Assurance Inspector

Reviewed By: Hager,Craig

QA Reviewer