

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-000014**Date Inspected:** 29-Nov-2006**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**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:** Liu Liu and Cheng Li Bin**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:** n/a**Summary of Items Observed:**

Office of Structural Materials Quality Assurance Inspector (QA), David McClary observed quality control functions related to procedure qualification (PQR) testing at the ZPMC facility in Shanghai, Republic of China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item	Description	WBS	Dwg No.	Status
1	PQR HP-2006118			Welded
	The QA Inspector observed welding of a Procedure Qualification (PQR) test plate identified as HP-2006118. The test was conducted using Flux Cored Arc Welding (FCAW), Hyundai Supercored 71H, electrode in the 3G (vertical) position. The QA Inspector observed ZPMC Quality Control (QC) recording the essential variable (amps, volts, travel speed) for each pass and randomly verified the parameters using an Amprobe® amperage / voltage meter and a stopwatch. The average parameters for the PQR were recorded as 202.9 amps, 25.7 volts, 112.9mm/min travel speed and a Heat Input of 2.77 KJ/mm. The welding appeared to comply with the contract documents.			
	Lot Number B60-022-06 was assigned for tracking purposes. See TL-6032 for additional details.			

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2 New Fabrication Facility Under Construction

The QA Inspector observed large components in the area of the new shop facility that ZPMC is building to construct this bridge. The QA Inspector asked ABF Quality Control Manager (QCM) Jim Bowers if this was part of the building construction or possibly the overhead crane system. Mr. Bowers did not know. ABF and Caltrans are scheduled to observe construction on the facility tomorrow. After review of the photographs taken, the large components appear to be container crane components.



Summary of Conversations:

ZPMC QC representative Mr. Lu Jian Hua informed Caltrans that the 1G FCAW Minimum HI PQR originally scheduled was cancelled and that ZPMC only intended to weld the Maximum HI PQR. The QA Inspector spoke with ABF Quality Control Manager (QCM) Jim Bowers and asked if the proposed Maximum Heat Input PQR would qualify the desired parameters for conducting the non-standard joint using ceramic backing that had been proposed. Mr. Bowers confirmed with ZPMC that, performing the Maximum Heat Input PQR, would still qualify the desired range for performing the non-standard joints proposed against ceramic backing.

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.

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Inspected By:	McClary,David	Quality Assurance Inspector
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Reviewed By:	Lowry,Patrick	QA Reviewer
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