

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000012
Date Inspected: 15-Nov-2006

Project Name: SAS Superstructure **OSM Arrival Time:** 800
Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1730
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Xie Ping	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				

The QA Inspector observed mechanical testing of the 3G (Vertical) Flux Cored Arc Welding (FCAW) Minimum Heat Input Procedure Qualification (PQR), identified as HP-2006106. All of the mechanical tests appeared to comply with the contract documents. Note: Charpy-V Notch impact tests were performed to the requirements of Seismic Performance Critical Members (SPCM) at -30 degrees Celsius.

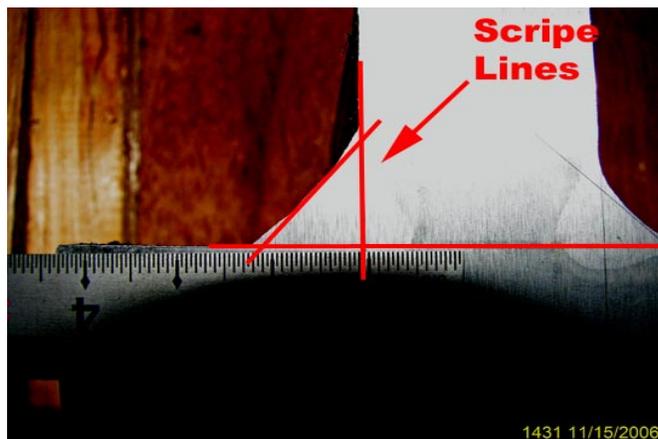


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2

The QA Inspector observed the macro-etches of the 1F (Flat) SAW Fillet Soundness PQR, identified as HP-2006114. The welds were concave. It appeared that ZPMC had just measured the size of the legs and did not account for the reduced throat dimensions cause by the convexity. The QA Inspector explained to ZPMC Testing Center Director Mr. Liu Liu that typically the macro-etch specimen should also be scribed at the planar intersection points of the weld and the line connecting the corners while remaining inside the weld metal. The welds are then measured for size to determine the maximum single pass and minimum multiple pass fillet weld qualified. This method allows for convex welds to be measured properly and for a reference datum to determine if the welds have sufficient penetration (up to or past the root). Mr. Liu Liu understood and stated he would prepare both the SAW and FCAW fillet weld samples that way for QA to look at tomorrow. See photo with scribe lines indicated below.



Summary of Conversations:

: ZPMCs Project Manager Mr. Chen Bin informed Caltrans that, since they did not get range of parameters qualified for the FCAW they wanted, they intend to switch to a different FCAW electrode (Hyundai Supercored 71H). Mr. Bin stated they would practice with the new wire during the week of November 20th through 24th and would like to begin testing of the new PQRs starting on November 28th. Mr. Bin also stated they should have the HPS 485 material by the end of November and would like to begin qualification of PQRs using this material after the PQRs for A709 gr. 345 are complete.

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