

BRAUNSM

INTERTEC

Braun Intertec Northwest
5405 North Lagoon Avenue
P.O. Box 17126
Portland, Oregon 97217
503-289-1778 Fax: 289-1918

*Engineers and Scientists Serving
the Built and Natural Environments*

January 26, 1996

Project EASX-95-0124

Report 07-016-1575

Mr. Thomas C. Young
Northwest Concrete and Masonry Association
1409 140th Place, NE
Suite 101
Seattle, Washington 98007

Dear Mr. Young:

Re: Steady State Thermal Conductance Tests conducted on a concrete masonry wall constructed at our test facility in Portland, Oregon.

Test Wall

Construction: 8' x 12' insulated masonry wall with running board construction ungrouted and unreinforced.

Block Source: West Block Products, 8" x 8" x 16" cmu.

Mortar: ASTM C270, Type S

Insulation: All cells filled with polymaster foam in race insulation.

Test: Steady State thermal conductor, ASTM C-236-87

Test Parameters

Average Metering Box Temperature	70.6°F
Average Cold Box Temperature	19.4°F
Temperature Differential	51.2°F
Air Circulation:	
Metering Box (Hot)	Natural Correction
Outside (Cold) Wind Velocity	15 mph
Average Wall Surface Temperature:	
Metering Box (Hot)	67.3°F
Outside (Cold Box)	27.5°F
Differential	39.8°F

Metering Area, Sq. Ft.	32.0
Average Heat Flux, Watts	36.6
Average Heat Flux, BTU/Hour	124.9

Test Results

Thermal Conductance (U), Surface to Surface	0.098
Thermal Resistance (R), Surface to Surface	10.20

Overall thermal resistance including indoor and outdoor air film coefficients.

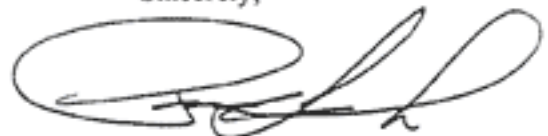
$$R = 10.20 + 0.17 + 0.68 = 11.05 \text{ BTU/hr-sq. ft.}^\circ\text{F}$$

Note: Upon disassembly of the cmu wall after completion of tests, it was noted that the foam had shrunk approximately 1/4 - 5/16" in the cells. Foam density was measured at 0.65 pcf.

All work was performed in compliance with Braun Intertec Q.C. Manual dated 02-23-94, Revision 1 and NDE Supplement dated 06-07-94, Revision 0.

If you have any questions or require additional testing, please do not hesitate to call me.

Sincerely,



Paul Irish
Technical Director

pi:sjg

cc: Polymaster, Inc.