CONTENTS

Atlanta '7' Summarie	8: Focus on Energy—Society Year Reviewed; 35 Honored by W. Stephen Comstock	1 9
TECHNIC	AL PAPERS	
2470	Conserving Energy in Dual-Duct Systems by Reducing the Throttling Ranges of Air-Temperature Controllers by W.F. Stoecker and R.P. Daber	23
2471	Stability of an Air-Temperature Control Loop by W.F. Stoecker, L.A. Rosario, M.E. Heidenreich and T.R. Phelan	35
2472	Experimental Studies of Mechanical Venting for Smoke Control in Tall Office Buildings by George T. Tamura and Chia-Yu Shaw	54
2473	Testing of Houses for Air Leakage Using a Pressure Method by Johnny Kronvall	72
2474	Future Fuel Supplies for Industry: Bases for Choice by Robert H. Essenhigh	80
2475	Three Approaches to Thermal Comfort by Donald A. McIntyre	101
2476	Application of Acceptable Temperature Drifts to Built Environments as a Mode of Energy Conservation by Larry G. Berglund and Richard R. Gonzalez	110
2477-78	A Review of the Attenuation of Sound in Straight Lined and Unlined Ductwork of Rectangular Cross Section by István L. Vér	122
2479	Thermal Comfort and Energy Consumption in Winter Conditions—A New Experimental Approach by J. Hannay, L. Laret, J. Lebrun, D. Marret and P. Nusgens	150
2480	Retrofitting an Existing Wood-Frame Residence to Reduce its Heating and Cooling Energy Requirements by Douglas M. Burch and Charles M. Hunt	176
2481	A Technique for Protecting Retrofitted Wood-Frame Walls from Condensation Damage by Douglas M. Burch and Stephen J. Treado	197
2482	Application of Aerial Infrared Thermography to the Measurement of Building Heat Loss by Richard J. Goldstein	207
2483	An Infrared Technique for Estimating Building Heat Loss by Douglas M. Burch and Tamami Kusuda	227
2484	Transpiration Rates of Certain Fruits and Vegetables by Sudhir K. Sastry, C. Direlle Baird and Dennis E. Buffington	237
2485	Effect of Distribution Lines on Stand-By Loss of Service Water Heater by William W. Schultz and Victor W. Goldschmidt	256
2486	Heat, Mass and Momentum Transfer Data for Five Plate-Fin-Tube Heat Transfer Surfaces by Faye C. McQuiston	266
2487	Correlation of Heat, Mass and Momentum Transport Coefficients for Plate-Fin-Tube Heat Transfer Surfaces with Staggered Tubes by Faye C. McQuiston	294
2488	Feasibility of an Energy Index for Office Buildings by Lawrence G. Spielvogel, Joseph A. Orlando and Philip Hayes	310
2489	Thermal Stratification in Factories—Cooling Loads and Temperature Profiles by Richard A. Beier and Robert L. Gorton	325
2490	Comparison of Computer-Predicted Thermal Loads with Measured Data from Three Occupied Townhouses by Wayne Robertz, Robert Rogers, Daniel Nall and Donald Greenberg	340

SYMPOSIUM PAPERS

AT-78-1	EFFICIENCY OF COMBUSTION SYSTEMS IV	
1	Evaluation of Fuel Oil Additives for Increasing Efficiency and Reducing Emissions of Boilers by Robert	367
	Wood Stove Testing Methods and Some Preliminary Experimental Results by J.W. Shelton, T. Black, M. Chaffee and M. Schwartz	388
	by Joseph Chi and George E. Kelly Fisional of Fossil-Fired Heating Systems for Labeling	405
	A Short Method to Determine Seasonal Efficiency of Fossil Fired Hearing Systems for Language Purposes by Ulrich Bonne and Jack P. Langmead	422
	COMBUSTION-DRIVEN OSCILLATIONS	449
	Design Criteria and Models for Preventing Combustion Oscillations by Peter K. Baade	466
	Transmission of Combustion Roar from Burners and Furnaces by Abbott A. Putnam An Analysis of the Pulse Combustion Burner by Frederick W. Ahrens, Choong Kim and Shiu-Wing Tam	477 488
AT-78-3	ENVIRONMENTAL CONTROL FOR THE RESEARCH LABORATORY	
	Laboratory Fume Hoods: Part 1 — A Performance Test by K.J. Caplan and G.W. Knutson Part 2 — Influence of Room Air Supply by K.J. Caplan and G.W. Knutson	511 522 538
	Energy Recovery Performance in the Research Laboratory by Robert C. Moyer	547
AT-78-4	AIR FILTER TESTING	561
	A Report on the ASHRAE Standard 52-68 Evaluation Test Program by C.J. Bauder	572
	A New Filter Media Flow Resistance Tester by Marion Hollingsworth, Jr	590 600
AT-78-5	COMPUTER-AIDED DUCT DESIGN	047
	A Practical Approach to Computer-Aided Duct Design by Francis Ferreira	617 624
	Computer-Aided Duct Design in a Small Engineering Office by Edwin B. Miller and Robert D. Weaver	647
AT-78-6	THE DYNAMIC RESPONSE FACTOR AND ITS IMPORTANCE IN OVERALL THERMAL PERFORMANCE OF BUILDINGS	
	Comments on the Z-Transfer Function Method for Calculating Heat Transfer in Buildings by Gintas P. Mitalas	
	At the Chapitic Heat of Building Materials by Hon P. Tye and S.C. Spilliey	010
	A Note on Response Factors and Conduction Transfer Functions by Bradley A. Peavy	001
	An Experimental Study of Equivalent Thermal Properties of a Wall SEction with Air Cavities by C.O. Pedersen and G.H. Younker.	•
AT-78-7	PEOPLE IN THERMAL ENVIRONMENTS—A TECHNICAL REVIEW, PART I	740
	Assessment of Thermal Comfort by Ralph F. Goldman	713 n
	An Overview of Clothing as it Relates to the Physiology of Plantal Commerce, 2 commerce, and Richard B. Hayter	
AT-78-7A	PEOPLE IN THERMAL ENVIRONMENTS—A TECHNICAL REVIEW, PART II	
	Mathematical Models for Predicting the Thermal Comfort Response of Building Occupants by Larry	
	Thermal and Non-Thermal Human Responses to Air Movement and Relative Human Responses to Air Movement Air Mov	 . 750
	Woods	. 760

AT-78-8	ANALYSIS OF SEASONAL OPERATING PERFORMANCE OF RESIDENTIAL SYSTEMS BY USE OF COMPUTER SIMULATION	
	Computer Simulation by actual C. aron and way no third cay the contract of the	767
	Saving Energy by Night Setback of a Residential Heat Pump System by George R. Schade	786
	Charles E. Bullock	799
•	BUSINESS	
ASHRAE	Past Meetings	817
ASHRAE	International Associates	. 817
Society P	residents	818
Honors a	nd Awards	819
Internatio	onal Best Papers	. 823
Bylaws .		. 826
ASHRAE	Code of Ethics	. 831

The following items will appear in Volume 84, Part 2:

Officers, Directors, Committeemen, Staff
Chapter Officers 1978-79
ASHRAE Technical Committees and Task Groups
ASHRAE Standard Project Committees
In Memoriam
Volume 84 Index by Author
Volume 84 Index by Title

W.S. Comstock, Editor, ASHRAE Special Publications Linda B. Bass, Assistant Editor Kristen Simone, Production Assistant Stella Capitelli, Editorial Assistant/Secretary