CONTENTS

Commitment: ASHRAE's Theme for 1975 by W. Stephen Comstock ........................................... 1
Host Chapter: Boston .................................................................................................................. 2
Summaries of Technical Sessions, Symposiums, Forums and Seminars ...................................... 3

TECHNICAL PAPERS:

2362 Development of an Improved Cooling Load Calculation Method by Dr. William Rudyke and Fernando Duran .... 19
2363 Comparison between Measured Computer-Predicted Hourly Heating and Cooling Energy Requirements for an Instrumented Wood-Framed Townhouse Subjected to Laboratory Tests by D.M. Burch, S.A. Peavy and F.J. Powell ................................................................. 70
2364 Heat Gain by Conduction through Exterior Walls and Roofs — Transmission Matrix Method by Dennis E. Buffington .................................................................................................................................. 89
2365 Energy Usage and Relative Utilization Efficiencies of Oil-, Gas-, and Electric-Heated Single-Family Homes by V.S. Manian and A. Juchymenko ................................................................. 102
2366 Determination of Individual Preferred Temperatures by D.A. McIntyre ......................................................... 131
2367 Interindividual Differences in Ambient Temperatures Preferred by Seated Persons by P.O. Fanger and G. Langhild ............................................................................................................ 140
2368 Effective Temperature (ET) as a Predictor of Thermal Comfort by R.H. Roffes, R.B. Hayler and G. Milken 148
2369 The Effect of Temperature on Preferred Air Velocity for Sedentary Subjects Dressed in Shorts by D.R. Burton, K.A. Robeson and R.G. Nevin .................................................................................................. 157
2373 On the Behavior of High Velocity Air in Cylindrical Branch Take-Offs by C.M. Rodkiewicz and Tsun-Yan Hsieh ......................................................................................................................... 213
2374 Pressure Drop in Flat-Oval Spiral Air Ducts by J.W. Hoyt and M.J. Diaz ......................................................... 201
2376 Prediction of Air Flow and Comfort in Air-Conditioned Spaces by P.V. Nielsen ........................................................................................................................................................................... 247
2378 Effects of Surface Condition on Nuclear Boiling of Refrigerant-11 by H.L. Sauer, Jr., R.A. Medrow and A.M. Simonwala .................................................................................................................. 274
2379 Heat Transfer in Finned-Tube Hot-Water Boilers by L. Block ........................................................................ 292
2380 Transfer Functions for Crossflow Multislot Heat Exchangers by S.C. Bhargava, F.C. McQuiston and L.D. Zinkle ............................................................................................................................. 294

SYMPOSIA:

BO-75-1 LATEST DEVELOPMENTS IN SMOKE AND FIRE CONTROL
Smoke and Fire Control in Large Aluminium Splice by P.R. Decca and R.J. Cresci .................................................. 319
Smoke Movement Studies in Veterans Administration Hospitals by W.A. Schmidt .................................................. 338
Smoke Control in Buildings: A Threat or a Promise by W.A. Webb ....................................................................... 344

BO-75-2 OPTIMIZING THE PERFORMANCE OF EXISTING AIR-CONDITIONING SYSTEMS
Energy Conservation in Existing Systems by G.W. Gupton, Jr. ............................................................................ 353
A Low-Calorie Energy Diet for Your Building by N.J. Janisse ........................................................................... 362
The Mysterious Behavior of Mult-Zones and Double Ducts by A.Z. Levine .......................................................................... 371

BO-75-3 ROTARY AIR-TO-AIR HEAT EXCHANGERS FOR ENERGY RECOVERY
Leakage and Carry-Over in Rotary Air-to-Air Heat Exchangers as Determined by Microbiological and Tracer Gas Procedures by D.R. Fisher, H.N. Gawley and R.E. Chart ........................................................................ 389
The Effectiveness and Rating of Air-to-Air Heat Exchangers by H.N. Gawley and D.R. Fisher ................................................................................................................................. 401
COMMITMENT
ASHRAE'S THEME FOR 1975

W. STEPHEN COMSTOCK
Assistant Member ASHRAE

Over 1,000 members and guests attended the 1975 Annual Meeting held in the Sheraton-Boston Hotel, Boston, MA, June 22-26.

Keynoting the five-day session was President William J. Collins, calling for "commitment." Asking each ASHRAE member to do all that he can to advance the name of the Society and the profession, Mr. Collins said that only by committing ourselves can we accomplish a job well done. Ingratitude, pride and hard work are the real answers to the problems of today's energy conscious world, he added, for not only do we have challenges, we also have opportunities.

Earlier addresses were made by David J. Levine, Carrier Distributing Co., New Orleans, La.; Emil E. Flirber, Frigidaire, Inc., Fort Worth, TX; and Richard D. Perry, Perry Engineering, Ltd., Vancouver, B.C., Canada.

In Memoriam 1974-75

Volume 51 Index by Title

Volume 81 Index by Author

W.S. Comstock
Editor

ASHRAE Special Publications

HONORS AND AWARDS
Nine awards were presented to 35 individuals during the annual meeting. The Lincoln Boulton Membership Medal—Robert C. Mackay, sales representative, SA Armstrong, Ltd., Toronto, Ontario, Canada. This award was established in 1967 to commemorate the late President Member Lincoln Boulton's effort in recruiting new members and is presented annually to the individual who performs the most outstanding work in increasing the membership of the Society.

ASHRAE Honor Addams Award—Douglas C. Hamilton, Purdue University. Initiated in 1956 in honor of President Member Homer Addams, the purpose of this award is to encourage graduate student work on ASHRAE research projects. Mr. Hamilton's thesis "Dynamical Response Characteristics of a Discharge Air Temperature Control System at Near Full and Part Heating Load" (ASHRAE TRANSACTIONS, Vol. 80, Part I).

Distinguished Service Award—Eighteen men were selected to receive this award which is given to members who have given freely of their time and talent on behalf of the Society and have served faithfully and with distinction: John H. Clark, Life Member and retired from the Northside Corporation; Ralph Elsey, senior application engineer, Carrier Division, Syracuse, NY; Dixon A. Ervin, Jr., Ervin Engineers, Seattle, WA and ASHRAE Fellow; Robert J. Evans, assistant director of engineering, Air-Conditioning and Refrigeration Institute, Atlanta, VA; David S. Fink, David S. Fink Company, Phoenix, AZ; Edmund W. Gifford, retired from Ed. Gifford & Company, Inc., Milwaukee, WI and Life Member, William R. Johnson, head of the Engineering Department of Federal Company of Oklahoma City, OK, Jacob Klaassen, program manager, Central Utilities, the Canadian Federal Government; Don Massa, vice president of engineering, Lopeman Corporation, Sidney, OH; Keith G. Massett, vice president, Massett Company, Seattle, WA; Bruno P. Morabito, Carrier Corporation, Syracuse, NY; Donald E. Nichols, president of Thomason & Associates Consulting Engineers, Nashville, TN and ASHRAE Fellow, Alan W. Oaks, president, Oaks Mechanical Contractors, Ottawa Ontario, Canada; Joseph