

CONTENTS

Contributors

ASHRAE Technical Committees, Task Groups, and Technical Resource Groups

ASHRAE Research: Improving the Quality of Life

Preface

COMFORT APPLICATIONS

- Chapter*
1. **Residences** (TC 8.11, Unitary and Room Air Conditioners and Heat Pumps)
 2. **Retail Facilities** (TC 9.8, Large-Building Air-Conditioning Applications)
 3. **Commercial and Public Buildings** (TC 9.8)
 4. **Places of Assembly** (TC 9.8)
 5. **Hotels, Motels, and Dormitories** (TC 9.8)
 6. **Educational Facilities** (TC 9.7)
 7. **Health Care Facilities** (TC 9.6, Healthcare Facilities)
 8. **Justice Facilities** (TG9.JF, Justice Facilities)
 9. **Automobiles and Mass Transit** (TC 9.3, Transportation Air Conditioning)
 10. **Aircraft** (TC 9.3)
 11. **Ships** (TC 9.3)

INDUSTRIAL APPLICATIONS

- Chapter*
12. **Industrial Air Conditioning** (TC 9.2, Industrial Air Conditioning)
 13. **Enclosed Vehicular Facilities** (TC 5.9, Enclosed Vehicular Facilities)
 14. **Laboratories** (TC 9.10, Laboratory Systems)
 15. **Engine Test Facilities** (TC 9.2, Industrial Air Conditioning)
 16. **Clean Spaces** (TC 9.11, Clean Space)
 17. **Data Processing and Electronic Office Areas** (TC 9.9, Mission Critical Facilities, Technology Spaces and Electronic Equipment)
 18. **Printing Plants** (TC 9.2)
 19. **Textile Processing Plants** (TC 9.2)
 20. **Photographic Material Facilities** (TC 9.2)
 21. **Museums, Galleries, Archives, and Libraries** (TC 9.8)
 22. **Environmental Control for Animals and Plants** (TC 2.2, Plant and Animal Environment)
 23. **Drying and Storing Selected Farm Crops** (TC 2.2)
 24. **Air Conditioning of Wood and Paper Product Facilities** (TC 9.2)
 25. **Power Plants** (TC 9.2)
 26. **Nuclear Facilities** (TC 9.2)
 27. **Mine Air Conditioning and Ventilation** (TC 9.2)
 28. **Industrial Drying Systems** (TC 9.2)
 29. **Ventilation of the Industrial Environment** (TC 5.8, Industrial Ventilation Systems)
 30. **Industrial Local Exhaust Systems** (TC 5.8)
 31. **Kitchen Ventilation** (TC 5.10, Kitchen Ventilation)

ENERGY-RELATED APPLICATIONS

- Chapter*
- 32. **Geothermal Energy** (TC 6.8, Geothermal Energy Utilization)
 - 33. **Solar Energy Use** (TC 6.7, Solar Energy Utilization)
 - 34. **Thermal Storage** (TC 6.9, Thermal Storage)

BUILDING OPERATIONS AND MANAGEMENT

- Chapter*
- 35. **Energy Use and Management** (TC 7.6, Systems Energy Utilization)
 - 36. **Owning and Operating Costs** (TC 7.8, Owning and Operating Costs)
 - 37. **Testing, Adjusting, and Balancing** (TC 7.7, Testing and Balancing)
 - 38. **Operation and Maintenance Management** (TC 7.3, Operation and Maintenance Management)
 - 39. **Computer Applications** (TC 1.5, Computer Applications)
 - 40. **Building Energy Monitoring** (TC 7.6)
 - 41. **Supervisory Control Strategies and Optimization** (TC 7.4, Building Operation Dynamics)
 - 42. **HVAC Commissioning** (TC 7.9, Building Commissioning)

GENERAL APPLICATIONS

- Chapter*
- 43. **Building Envelopes** (TC 4.4, Building Materials and Building Envelope Performance)
 - 44. **Building Air Intake and Exhaust Design** (TC 4.3, Ventilation Requirements and Infiltration)
 - 45. **Control of Gaseous Indoor Air Contaminants** (TC 2.3, Gaseous Air Contaminants and Gas Contaminant Removal Equipment)
 - 46. **Design and Application of Controls** (TC 1.4, Control Theory and Application)
 - 47. **Sound and Vibration Control** (TC 2.6, Sound and Vibration Control)
 - 48. **Water Treatment** (TC 3.6, Water Treatment)
 - 49. **Service Water Heating** (TC 6.6,)Service Water Heating
 - 50. **Snow Melting and Freeze Protection** (TC 6.5, Radiant and Convective Space Heating and Cooling)
 - 51. **Evaporative Cooling** (TC 5.7, Evaporative Cooling)
 - 52. **Fire and Smoke Management** (TC 5.6, Control of Fire and Smoke)
 - 53. **Radiant Heating and Cooling** (TC 6.5)
 - 54. **Seismic and Wind Restraint Design** (TC 2.7, Seismic and Wind Restraint Design)
 - 55. **Electrical Considerations** (TC 1.9, Electrical Systems)
 - 56. **Room Air Distribution** (TC 5.3, Room Air Distribution)
 - 57. **Integrated Building Design** (TC 7.1, Integrated Building Design)
 - 58. **Chemical, Biological, Radiological, and Explosive Incidents** (TRG2.BCBL, Blast, Chemical, and Biological Remediation)
 - 59. **Codes and Standards**

Additions and Corrections

Index

Composite index to the 2004 HVAC Systems and Equipment, 2005 Fundamentals, 2006 Refrigeration, and 2003 HVAC Applications volumes