

# ASHRAE TECHNICAL COMMITTEES, TASK GROUPS, AND TECHNICAL RESOURCE GROUPS

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## SECTION 1.0—FUNDAMENTALS AND GENERAL

- 1.1 Thermodynamics and Psychrometrics
- 1.2 Instruments and Measurement
- 1.3 Heat Transfer and Fluid Flow
- 1.4 Control Theory and Application
- 1.5 Computer Applications
- 1.6 Terminology
- 1.7 Business, Management, and General Legal Education
- 1.8 Mechanical Systems Insulation
- 1.9 Electrical Systems
- 1.10 Cogeneration Systems
- 1.11 Electric Motors and Motor Control
- 1.12 Moisture Management in Buildings

TG1.EASB Exergy Analysis for Sustainable Buildings

## SECTION 2.0—ENVIRONMENTAL QUALITY

- 2.1 Physiology and Human Environment
- 2.2 Plant and Animal Environment
- 2.3 Gaseous Air Contaminants and Gas Contaminant Removal Equipment
- 2.4 Particulate Air Contaminants and Particulate Contaminant Removal Equipment
- 2.5 Global Climate Change
- 2.6 Sound and Vibration Control
- 2.7 Seismic and Wind Restraint Design
- 2.8 Building Environmental Impacts and Sustainability

TG2.UVAS Ultraviolet Air and Surface Treatment

TRG Blast, Chemical and Biological Remediation

## SECTION 3.0—MATERIALS AND PROCESSES

- 3.1 Refrigerants and Secondary Coolants
- 3.2 Refrigerant System Chemistry
- 3.3 Refrigerant Contaminant Control
- 3.4 Lubrication
- 3.6 Water Treatment
- 3.8 Refrigerant Containment

## SECTION 4.0—LOAD CALCULATIONS AND ENERGY REQUIREMENTS

- 4.1 Load Calculation Data and Procedures
- 4.2 Climate Information
- 4.3 Ventilation Requirements and Infiltration
- 4.4 Building Materials and Building Envelope Performance
- 4.5 Fenestration
- 4.7 Energy Calculations
- 4.10 Indoor Environmental Modeling

## SECTION 5.0—VENTILATION AND AIR DISTRIBUTION

- 5.1 Fans
- 5.2 Duct Design
- 5.3 Room Air Distribution
- 5.4 Industrial Process Air Cleaning (Air Pollution Control)
- 5.5 Air-to-Air Energy Recovery
- 5.6 Control of Fire and Smoke
- 5.7 Evaporative Cooling
- 5.8 Industrial Ventilation Systems
- 5.9 Enclosed Vehicular Facilities
- 5.10 Kitchen Ventilation
- 5.11 Humidifying Equipment

## SECTION 6.0—HEATING EQUIPMENT, HEATING AND COOLING SYSTEMS AND APPLICATIONS

- 6.1 Hydronic and Steam Equipment and Systems

- 6.2 District Energy
- 6.3 Central Forced-Air Heating and Cooling Systems
- 6.5 Radiant and Convective Space Heating and Cooling
- 6.6 Service Water Heating
- 6.7 Solar Energy Utilization
- 6.8 Geothermal Energy Utilization
- 6.9 Thermal Storage
- 6.10 Fuels and Combustion

## SECTION 7.0—BUILDING PERFORMANCE

- 7.1 Integrated Building Design
- 7.3 Operation and Maintenance Management
- 7.4 Building Operation Dynamics
- 7.5 Smart Building Systems
- 7.6 Systems Energy Utilization
- 7.7 Testing and Balancing
- 7.8 Owning and Operating Costs
- 7.9 Building Commissioning

## SECTION 8.0—AIR-CONDITIONING AND REFRIGERATION SYSTEM COMPONENTS

- 8.1 Positive Displacement Compressors
- 8.2 Centrifugal Machines
- 8.3 Absorption and Heat-Operated Machines
- 8.4 Air-to-Refrigerant Heat Transfer Equipment
- 8.5 Liquid-to-Refrigerant Heat Exchangers
- 8.6 Cooling Towers and Evaporative Condensers
- 8.7 Combustion Gas Turbine Inlet Air Cooling Systems
- 8.8 Refrigerant System Controls and Accessories
- 8.9 Residential Refrigerators and Food Freezers
- 8.10 Mechanical Dehumidification Equipment and Heat Pipes
- 8.11 Unitary and Room Air Conditioners and Heat Pumps
- 8.12 Desiccant Dehumidification Equipment and Components

## SECTION 9.0—BUILDING APPLICATIONS

- 9.1 Large-Building Air-Conditioning Systems
- 9.2 Industrial Air Conditioning
- 9.3 Transportation Air Conditioning
- 9.4 Applied Heat Pump/Heat Recovery Systems
- 9.5 Residential and Small-Building Applications
- 9.6 Healthcare Facilities
- 9.7 Educational Facilities
- 9.8 Large-Building Air-Conditioning Applications
- 9.9 Mission Critical Facilities, Technology Spaces and Electronic Equipment
- 9.10 Laboratory Systems
- 9.11 Clean Space
- 9.12 Tall Buildings

TG9.JF Justice Facilities

## SECTION 10.0—REFRIGERATION SYSTEMS

- 10.1 Custom-Engineered Refrigeration Systems
- 10.2 Automatic Icemaking Plants and Skating Rinks
- 10.3 Refrigerant Piping
- 10.4 Ultralow-Temperature Systems and Cryogenics
- 10.5 Refrigerated Distribution and Storage Facilities
- 10.6 Transport Refrigeration
- 10.7 Commercial Food and Beverage Cooling Display and Storage
- 10.8 Refrigeration Load Calculations
- 10.9 Refrigeration Application for Foods and Beverages
- 10.10 Management of Lubricant in Circulation