Benefits of Involvement in
ASHRAE Technical Committees (TC)

ASHRAE Region XIV

T.C. Overview:

Presenter: Tom Watson
Info: tom.watson@daikinapplied.com

T.C. 7.3 - Operation, Maintenance and Cost Management
Presenter: Sonya Pouncy Chair: Sonya Pouncy
Info & join: tc0703@ashrae.net & sonya.pouncy@gmail.com

T.C. 8.2 - Centrifugal Machines
Presenter: Justin Prosser Chair: Ray Good
Info & join: tc0802@ashrae.net

T.C. 9.2 - Industrial Air Conditioning and Ventilation
Presenter: Erich Binder Chair: Erich Binder
Info & join: tc0902@ashrae.net & erich.binder@worley.com

ASHRAE Has Four Types of Committees Whose Focus is Primarily on Technical Information

- **Technical Committees (TCs)**
- **Task Groups (TGs)**
- **Technical Resource Groups (TRGs)**
- **Multidisciplinary Task Groups (MTGs)**
  - provide the Society with expertise in a specific field or subject.

EHC (Environmental Health Committee) –
Not a TC but of great relevance today.

TC, TG, or TRG Members

All members are 

- Three types of membership
  - **Voting**
  - **Corresponding** (non voting)
  - **Provisional Corresponding** (non voting)
    - Opportunity to see if you want to be more involved

What do TCs Do?

- **Research** – identify needs, develop and follow projects
- **Handbook** – write and revised chapters
  - **Great way to learn technology**
- **Programs** – develop and present them at conferences
- **Standards** – initiate new standards & guidelines

How to get involved

- Cruise the ASHRAE website and find HB Chapters **which are relevant to you**
- Then choose a way to get involved
  - **E-mail the secretary or chair** about your interest (see TC website for specific email address)
  - **Apply for provisional corresponding membership** directly from the TC website(s).
  - **Attend Society Winter and Annual meetings** and the TC(s) you are interested in – volunteer!

THANK YOU!

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TC 7.3: Where We Fit In

SECTION 7- BUILDING PERFORMANCE

TC 7.1 **Integrated Building Design**	**TC 7.5** **Smart Building Systems**
TC 7.2 **HVAC&R Construction &** **Design Build Technologies**	**TC 7.6** **Building Energy Performance**
TC 7.3 **Operation, Maintenance** **& Cost Management**	**TC 7.7** **Testing & Balancing**
TC 7.4 **Exergy Analysis** **for Sustainable Buildings**	**TC 7.9** **Building Commissioning**

TC 7.3: Our Direction

SCOPE

This TC is concerned with the operation, maintenance, and cost management of buildings and the use of life cycle cost analysis techniques for decision-making when considering investments in building performance.

VISION STATEMENT

People spend much of their time inside buildings. In some places around the globe, it's as much as 90%. So how buildings are operated and maintained can have profound impacts on people's lives. Our goals are to promote awareness that:

- Building operation, maintenance and cost management are equally important to building performance as is building design; and
- An important key to achieving high building performance is the effective management of the personnel entrusted to operate and maintain the building.

TC 7.3: Who We Are

Industries

- Academia
- A&E Firms
- Controls Contractors
- Mechanical Contractors
- Commissioning Agents
- Facility Management
- Forensic Engineering
- Government
- Manufacturers
- Students
- Utilities

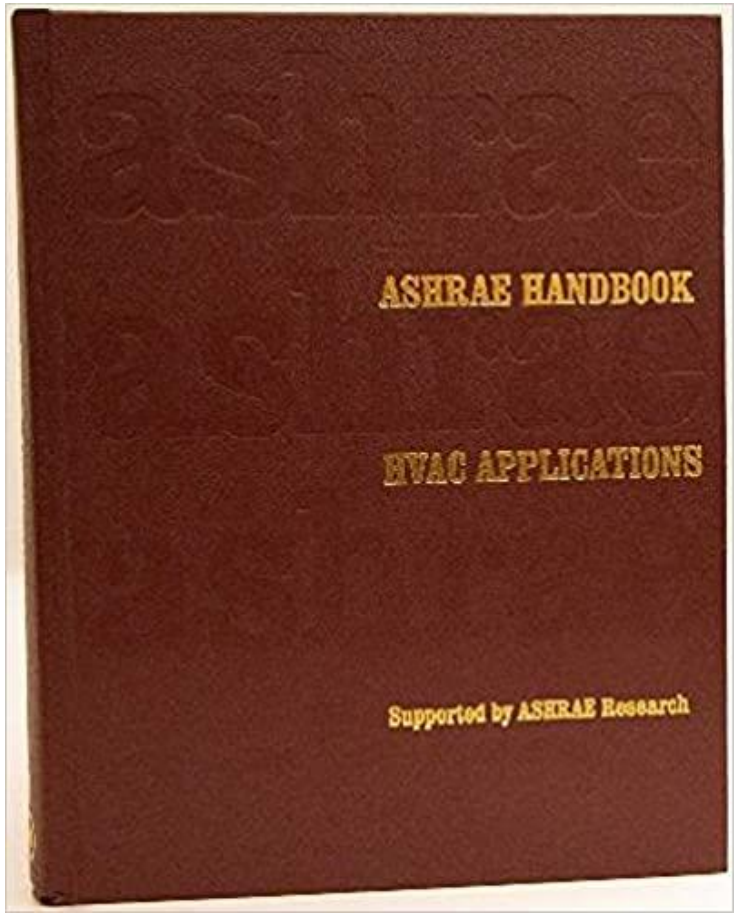
Countries

- Brazil
- Canada
- India
- Ireland
- Philippines
- United Arab Emirates
- United States

Cohorts

- YEA- 3%
- Women- 13%
- International- 17%

TC 7.3: Handbook Chapters



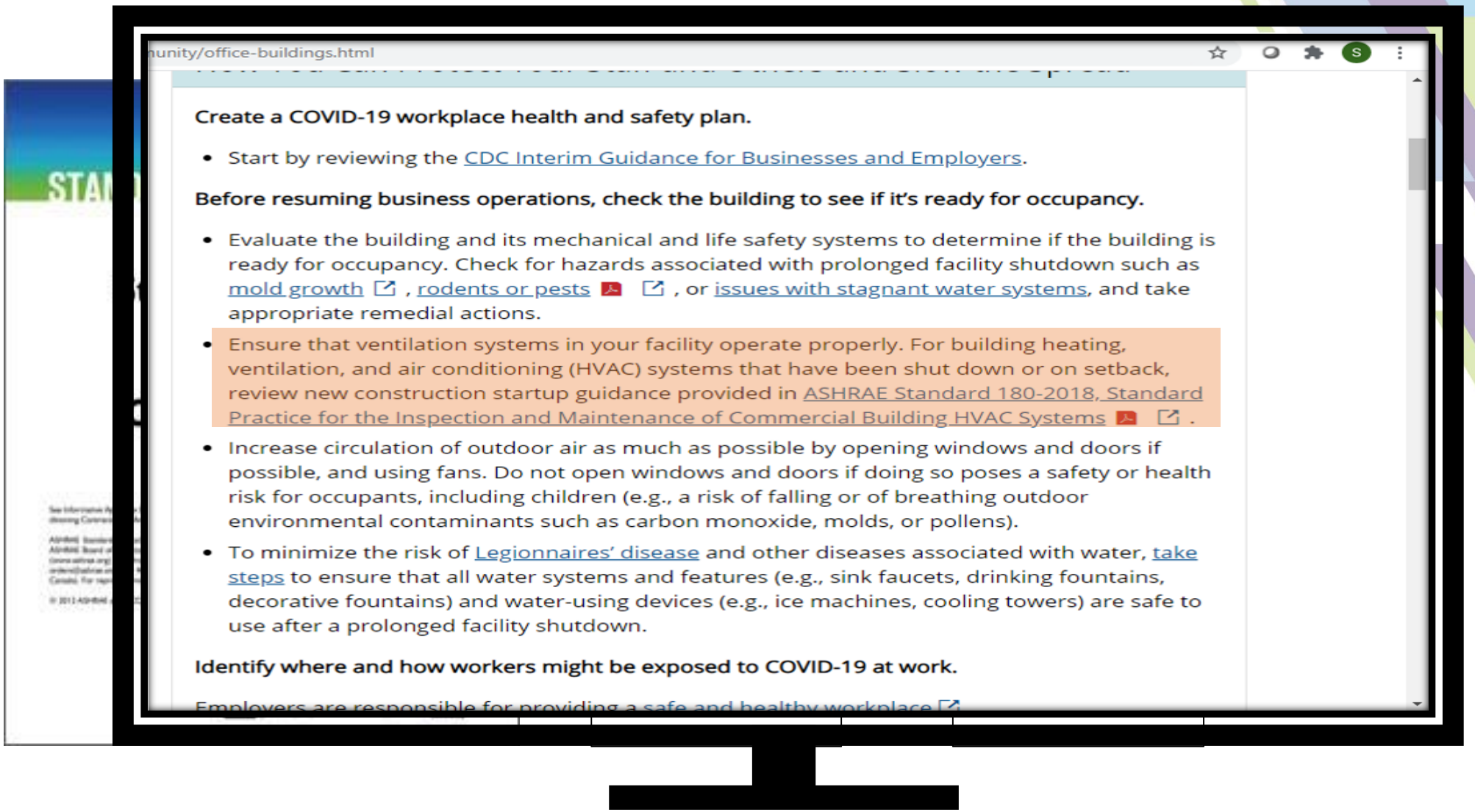
Chapter 38
OWNING AND OPERATING COSTS

Owning Costs.....38.1
Operating Costs.....38.4
Maintenance Costs.....38.7
Refrigerant Phaseouts.....38.8
Other Issues.....38.8
Economic Analysis Techniques.....38.11
Symbols.....38.13

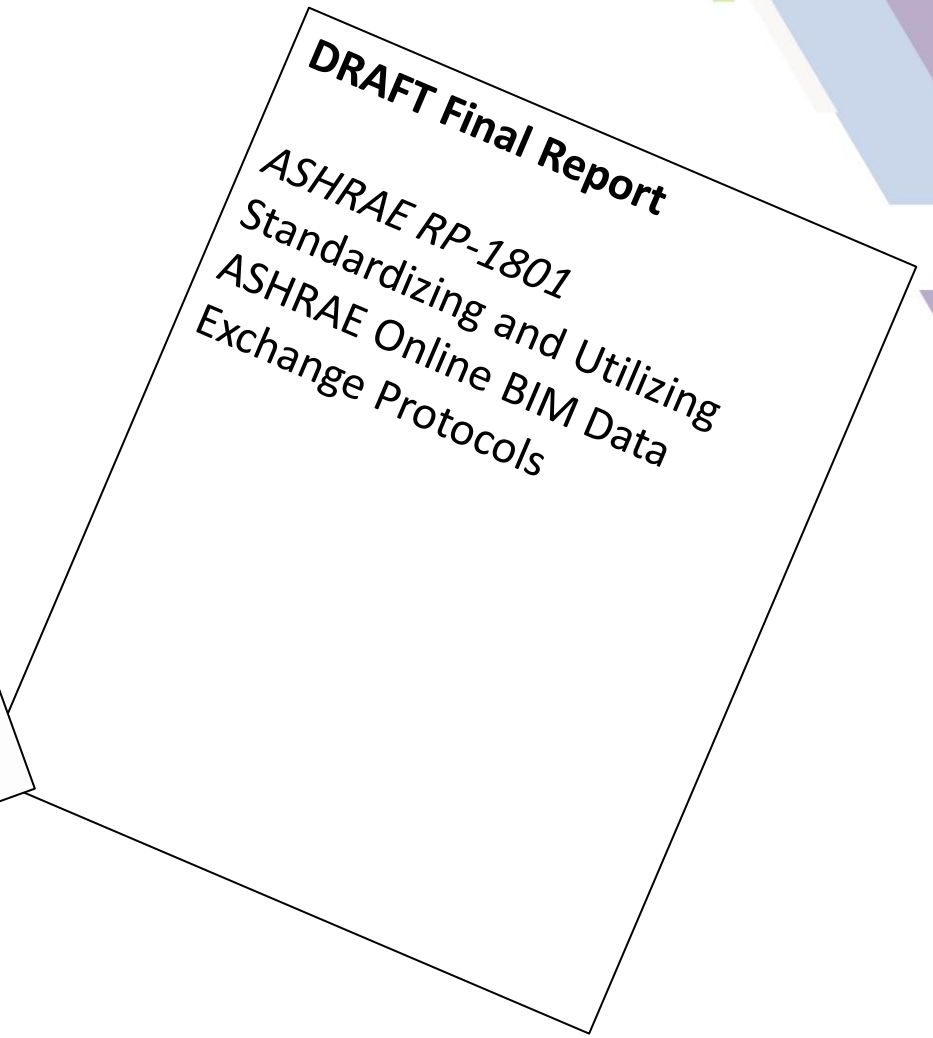
Chapter 40
OPERATIONS AND MAINTENANCE MANAGEMENT

Operations and Maintenance as Part of Life Cycle Costs....40.1
Operating a Facility for Optimal Performance.....40.2
Maintenance Strategies for Optimal Performance.....40.3
Documentation.....40.7
Staffing.....40.8
Managing Changes in Buildings.....40.10

TC 7.3: Standards and Guidelines



TC 7.3: Research Projects



TC 7.3: Programs at Recent Conferences

Seminars

- How Revisions to ASHRAE Standard 180 will Help Improve Maintenance Services
- Operation and Maintenance Management Training: How Useful Is It Really?
- How was that Supposed to Work Again? The Importance of Documented and Understandable Sequences of Operation throughout the Life Cycle of a High Performance Building
- Requirements for Extreme Weather Operation of HVAC System
- The Rise of Building EQ: Educational Facility Case Studies in Central Florida (CS 7.6)
- Smart Is as Smart Does: Case Studies from Intelligent Florida Buildings, Campuses and Cities(CS 1.4,7.5,7.9)
- How to Field-Measure and Score the Performance of an Installed HVAC System
- Documented HVAC System Efficiency Deterioration: A Case Study

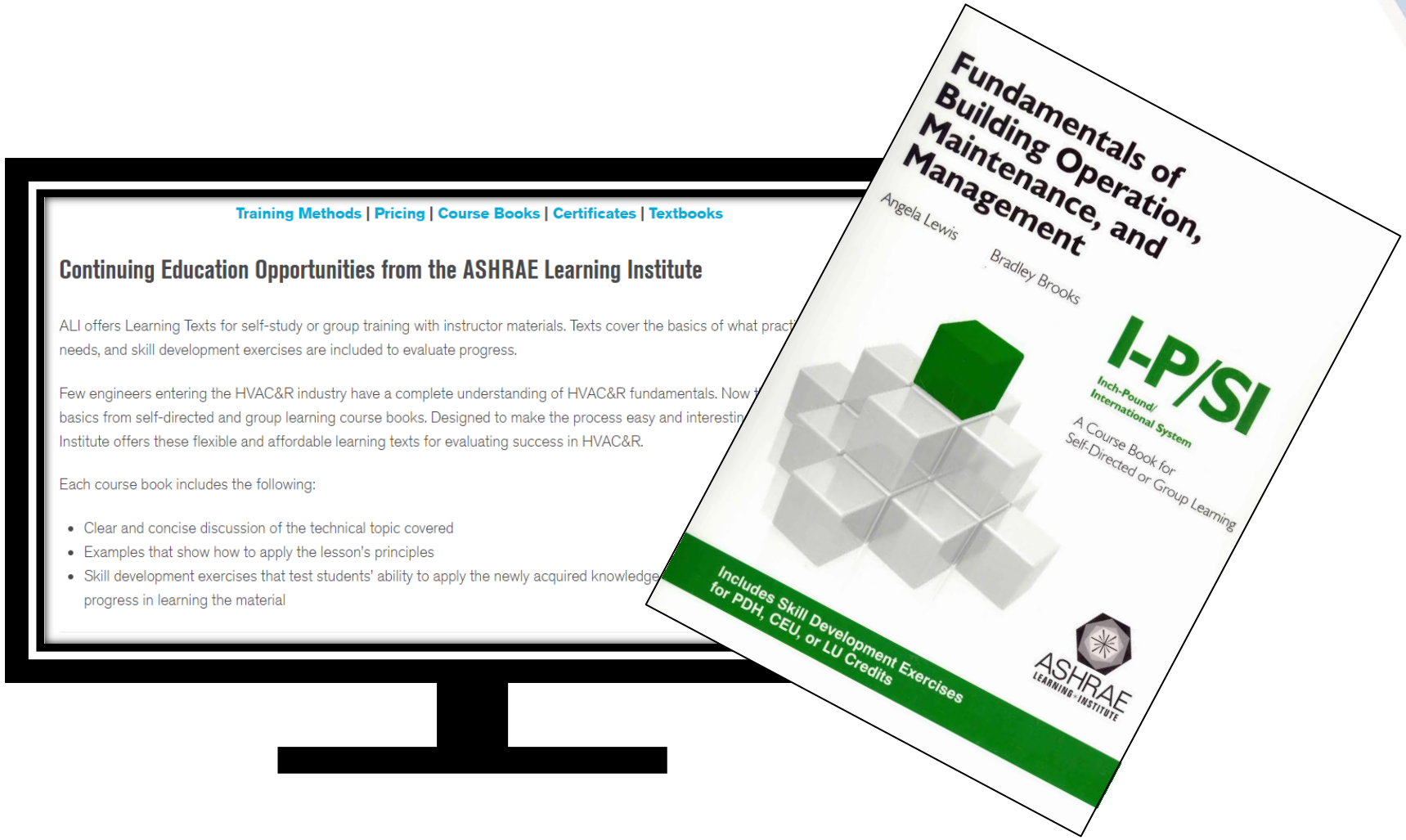
Workshops

- Construction, Operation and Maintenance of High Performance Systems of Large Central Plants and Distribution Systems
- Opaque OPRs Produce Obscure Objectives

Debates

- College of Fellows Debate: Designers Have No Obligation to Make Maintenance and Operations an Important Consideration in Design (CS1.7)
- BAS Graphics: Integrating Multiple Masters, Who Is the Boss?

TC 7.3: O&M in ASHRAE Learning Institute



TC 7.3: O&M in ASHRAE Certifications

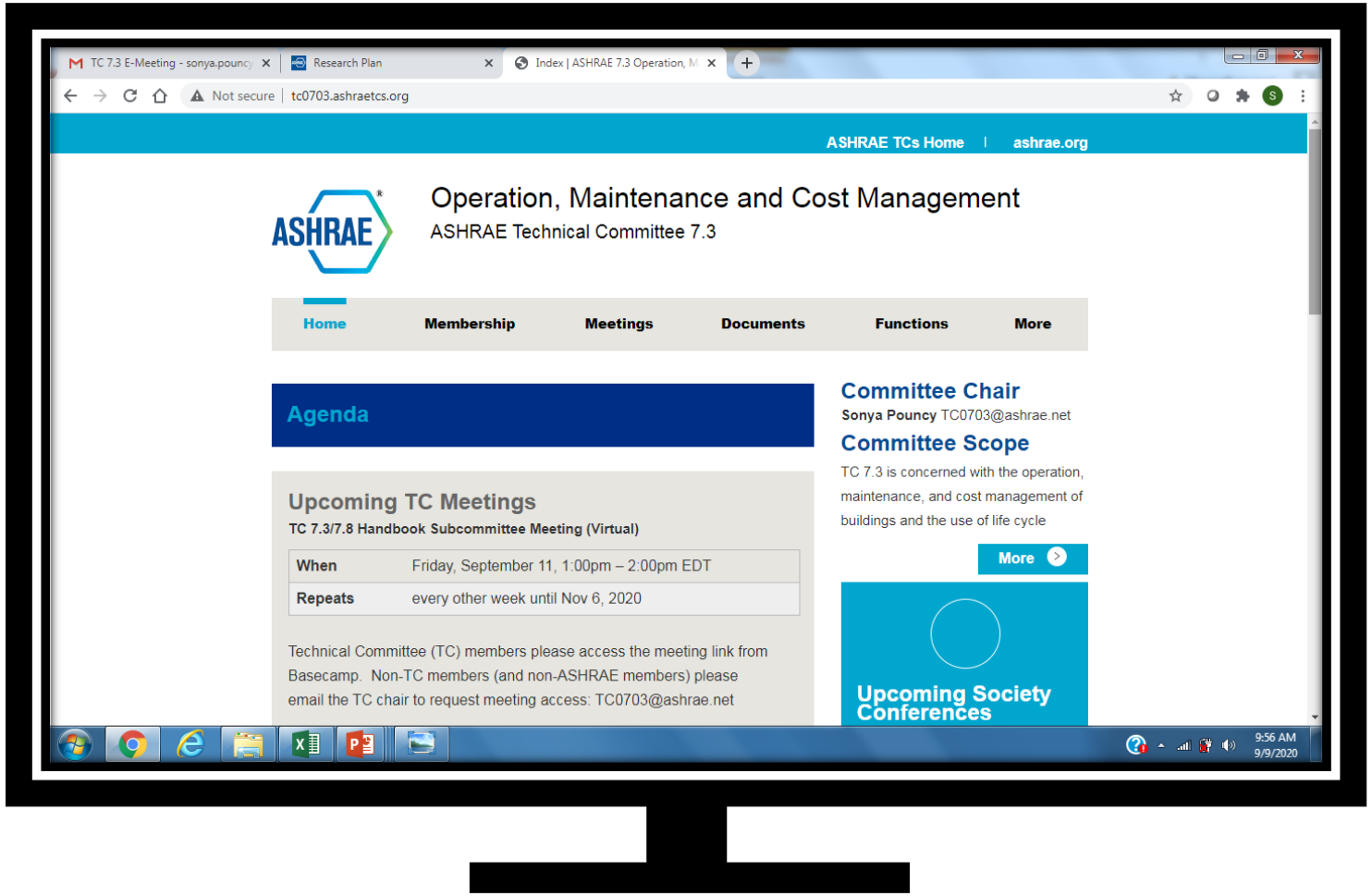
TC 7.3: Meetings

- Committee-of-the-Whole
  - Conference Tuesday
    1:00 – 3:00 PM

- Leadership Dinner
  - Conference Sunday, 5:00 PM

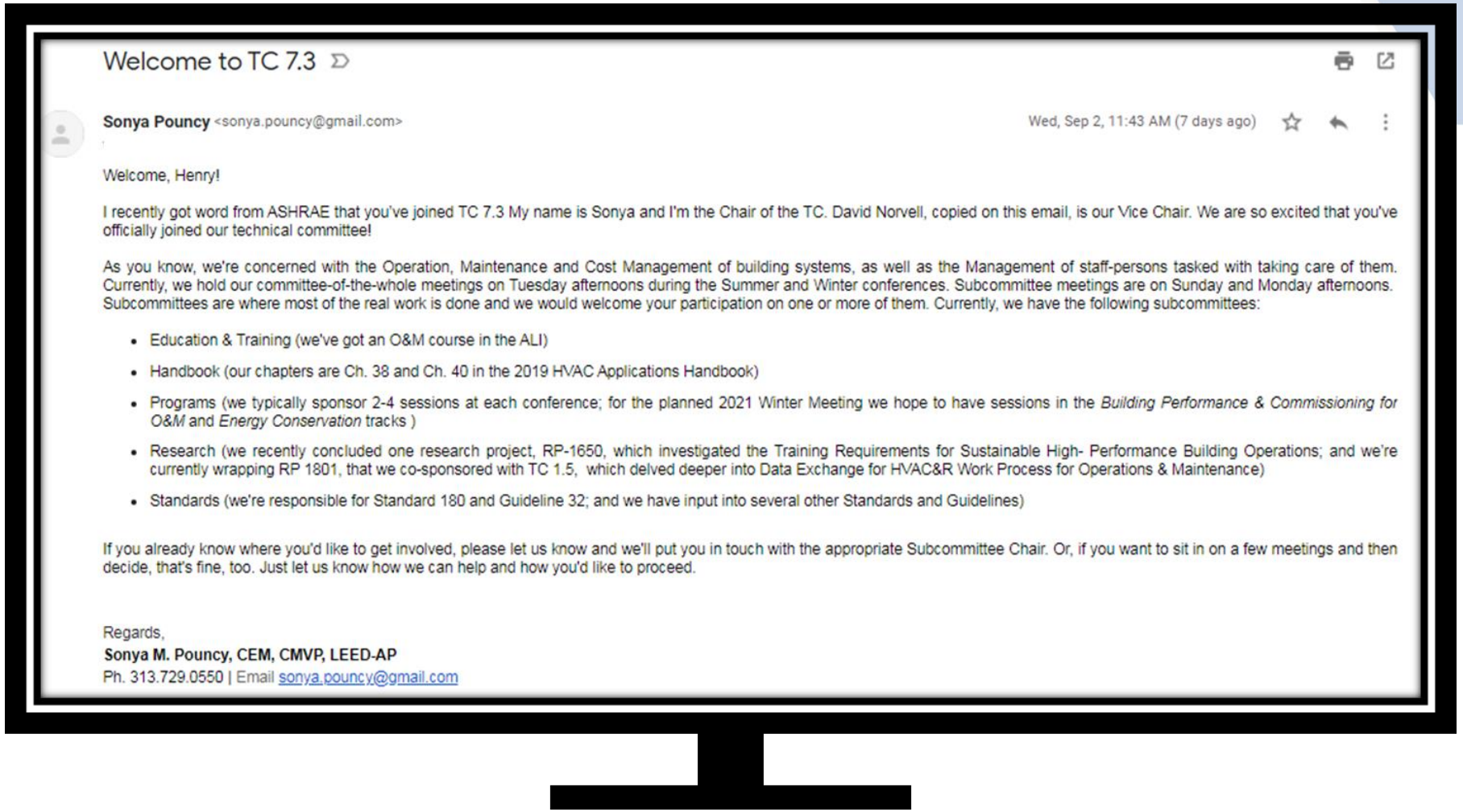
- **Education & Training Subcommittee**
  - Conference Sunday 1:30 – 3:00 PM
- **Handbook Subcommittee**
  - Conference Monday 5:15 – 6:15 PM
- **Programs Subcommittee**
  - Conference Monday 3:15 – 4:15 PM
- **Research Subcommittee**
  - Conference Monday 4:15 – 5:15 PM
- **Standards Subcommittee**
  - Conference Monday 2:15 – 3:15 PM

TC 7.3: Find Us on the Web



Website:
www.tc0703.ashrae.org
Email:
TC0703@ashrae.net

TC 7.3: Join Us



Welcome to TC 7.3

Sonya Pouncy <sonya.pouncy@gmail.com> Wed, Sep 2, 11:43 AM (7 days ago)

Welcome, Henry!

I recently got word from ASHRAE that you've joined TC 7.3 My name is Sonya and I'm the Chair of the TC. David Norvell, copied on this email, is our Vice Chair. We are so excited that you've officially joined our technical committee!

As you know, we're concerned with the Operation, Maintenance and Cost Management of building systems, as well as the Management of staff-persons tasked with taking care of them. Currently, we hold our committee-of-the-whole meetings on Tuesday afternoons during the Summer and Winter conferences. Subcommittee meetings are on Sunday and Monday afternoons. Subcommittees are where most of the real work is done and we would welcome your participation on one or more of them. Currently, we have the following subcommittees:

- Education & Training (we've got an O&M course in the ALI)
- Handbook (our chapters are Ch. 38 and Ch. 40 in the 2019 HVAC Applications Handbook)
- Programs (we typically sponsor 2-4 sessions at each conference; for the planned 2021 Winter Meeting we hope to have sessions in the *Building Performance & Commissioning for O&M* and *Energy Conservation* tracks)
- Research (we recently concluded one research project, RP-1650, which investigated the Training Requirements for Sustainable High- Performance Building Operations; and we're currently wrapping RP 1801, that we co-sponsored with TC 1.5, which delved deeper into Data Exchange for HVAC&R Work Process for Operations & Maintenance)
- Standards (we're responsible for Standard 180 and Guideline 32; and we have input into several other Standards and Guidelines)

If you already know where you'd like to get involved, please let us know and we'll put you in touch with the appropriate Subcommittee Chair. Or, if you want to sit in on a few meetings and then decide, that's fine, too. Just let us know how we can help and how you'd like to proceed.

Regards,
Sonya M. Pouncy, CEM, CMVP, LEED-AP
Ph. 313.729.0550 | Email sonya.pouncy@gmail.com

ASHRAE Region XIV

THANK YOU!

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TC 8.2 Where We Fit In

SECTION 8- AIR-CONDITIONING AND REFRIGERATION SYSTEM COMPONENTS

TC 8.1
Positive Displacement Compressors

TC 8.2
Centrifugal Machines

TC 8.3
Absorption and Heat Operated Machines

TC 8.4
Air-to-Refrigerant Heat Transfer Equipment

TC 8.5
Liquid-to-Refrigerant Heat Exchangers

TC 8.6
Cooling Towers and Evaporative Condensers

TC 8.7
Variable Refrigerant Flow

TC 8.8
Refrigerant System Controls and Accessories

TC 8.9
Residential Refrigerators and Food Freezers

TC 8.10
Mechanical and Desiccant Dehumidification Equipment, Heat Pipes and Components

TC 8.11
Unitary and Room Air Conditioners and Heat Pumps

TC 8.2: Centrifugal Machines

WEBSITE

https://tc0802.ashraetcs.org/index.php

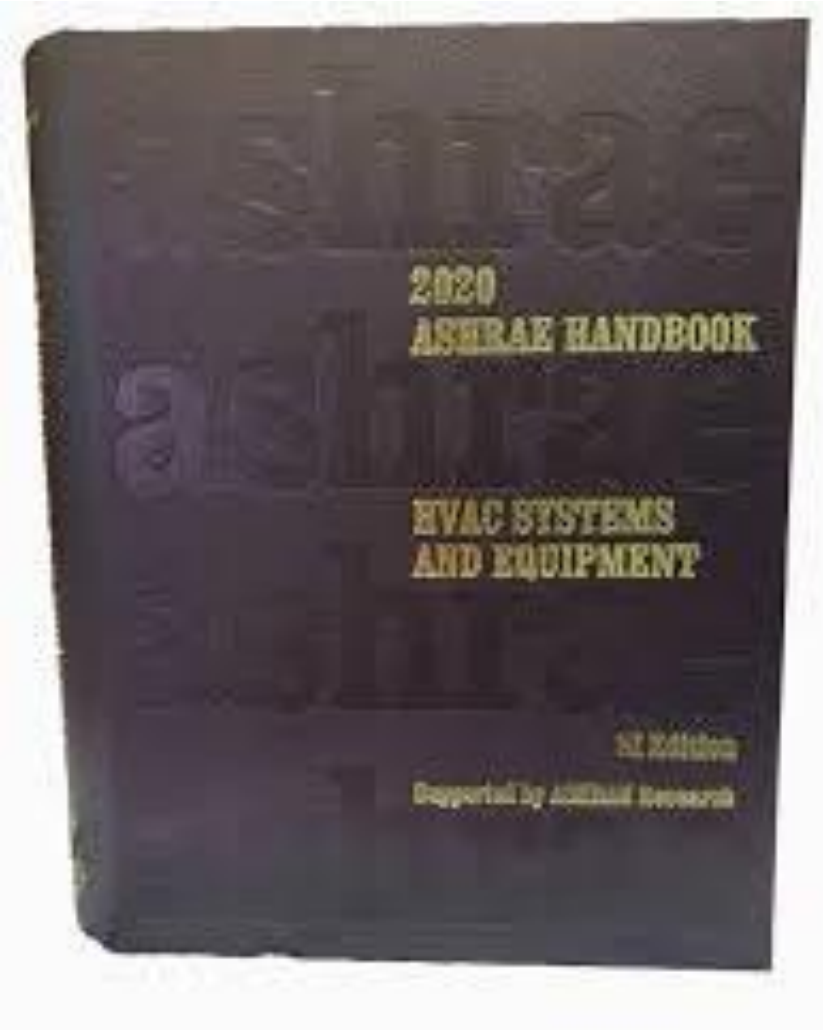
SCOPE

TC 8.2 is concerned with packaged equipment which involves **centrifugal compressors**, including those heat exchangers, drivers, controls and accessories, which are specific to packaged centrifugal equipment.

VISION STATEMENT

The mission of Technical Committee 8.2, Centrifugal Machines, is to provide world class technical expertise on all aspects of **centrifugal refrigeration machines**. This committee is a resource to industry, academia, and others following society protocols through seminars, standards, technical papers/articles and other presentations.

TC 8.2: Handbook Chapters



2020 HVAC SYSTEMS AND EQUIPMENT

COOLING EQUIPMENT AND COMPONENTS

Section:

38. Compressors (TC 8.1 and TC 8.2)

39. Condensers (TC 8.4, TC 8.5, and TC 8.6)

40. Cooling Towers (TC 8.6)

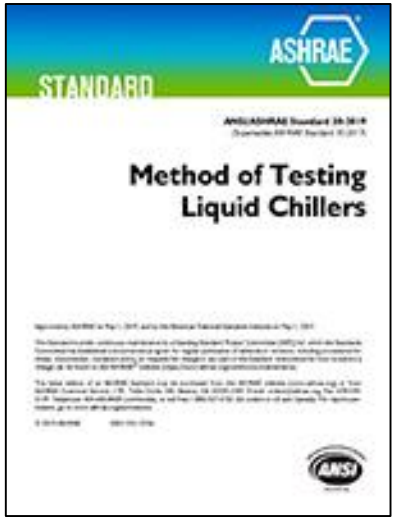
41. Evaporative Air-Cooling Equipment (TC 5.7)

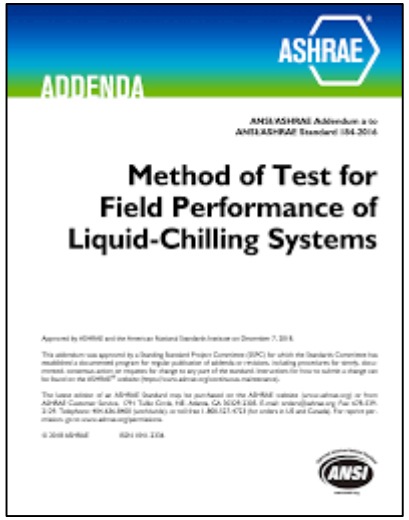
42. Liquid Coolers (TC 8.5)

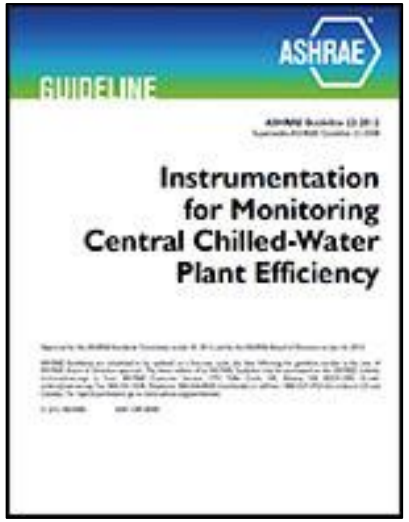
43. Liquid-Chilling Systems (TC 8.1 and TC 8.2)

TC 8.2: Standards and Guidelines

1. **Standard 30.** Method of Testing. Liquid Chillers
2. **Standard 184.** Method of Test for. Field Performance of Liquid-Chilling Systems
3. **Standard 225.** Method for Performance Testing Centrifugal Refrigerant Compressors and Condensing Units
4. **Guideline 22.** Instrumentation for Monitoring Central Chilled-Water Plant Efficiency







TC 8.2: Research Projects and Seminars

Research Projects

1. **Project 1677.** Measurement and Prediction of Waterside Fouling Performance of Internally Enhanced Condenser Tubes in Cooling Tower Applications
2. **Project 1716.** Oil Concentration of Field Installed Liquid Chillers with Flooded Type Evaporators
3. **Project 1793.** Development of Method of Test for Motor Component Thermal Conductivity

Seminars (Atlanta 2019)

1. **Seminar 21.** Uncertainties in Compressor Performance and Field Performance of Liquid-Chilling Systems
2. **Seminar 69.** Fundamentals of Centrifugal Chillers

TC 8.2: The best part

For the Good and Wellbeing ….

ASHRAE Region XIV

THANK YOU!

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TC 9.2 Where We Fit In

SECTION 9- BUILDING APPLICATIONS

TC 9.1 **Large Building A C Systems**	**TC 9.8** **Large Building AC Applications**
TC 9.2 **Industrial A C & Ventilation**	**TC 9.9** **Mission Critical Facilities**
TC 9.3 **Transportation Air Conditioning**	**TC 9.10** **Laboratory Systems**
TC 9.6 **Health Care Facilities**	TC 9.11 Clean Spaces
TC 9.7 **Educational Facilities**	**TC 9.12** **Tall Building**

TC 9.2 Industrial Air Conditioning & Ventilation

Purpose

Is concerned the environment that supports reliable operation of manufacturing and industrial processes and equipment, and **strives to ensure the safety of personnel working in industrial facilities.**

Recently Combined with TC 9.6 Industrial Ventilation'

Numerous other TC's formed from TC 9.2

Membership

15 Voting Members / 100 Corresponding / 10 International / 2 YEA

TC 9.2 Diverse Membership

Background

- Manufacturers
- Consultants
- Researchers
- Universities
- Utilities
- Regulators
- Contractors
- Government
- Students

Industries

- Mining
- Oil & Gas
- Energy/Power
- Manufacturing
- Nuclear
- Pulp & Paper
- Hazardous Spaces
- Laboratories
- Waste Disposal

International

- Argentina
- Brazil
- Canada
- India
- Italy
- Pakistan
- Singapore
- Turkey
- United Arab Emirates

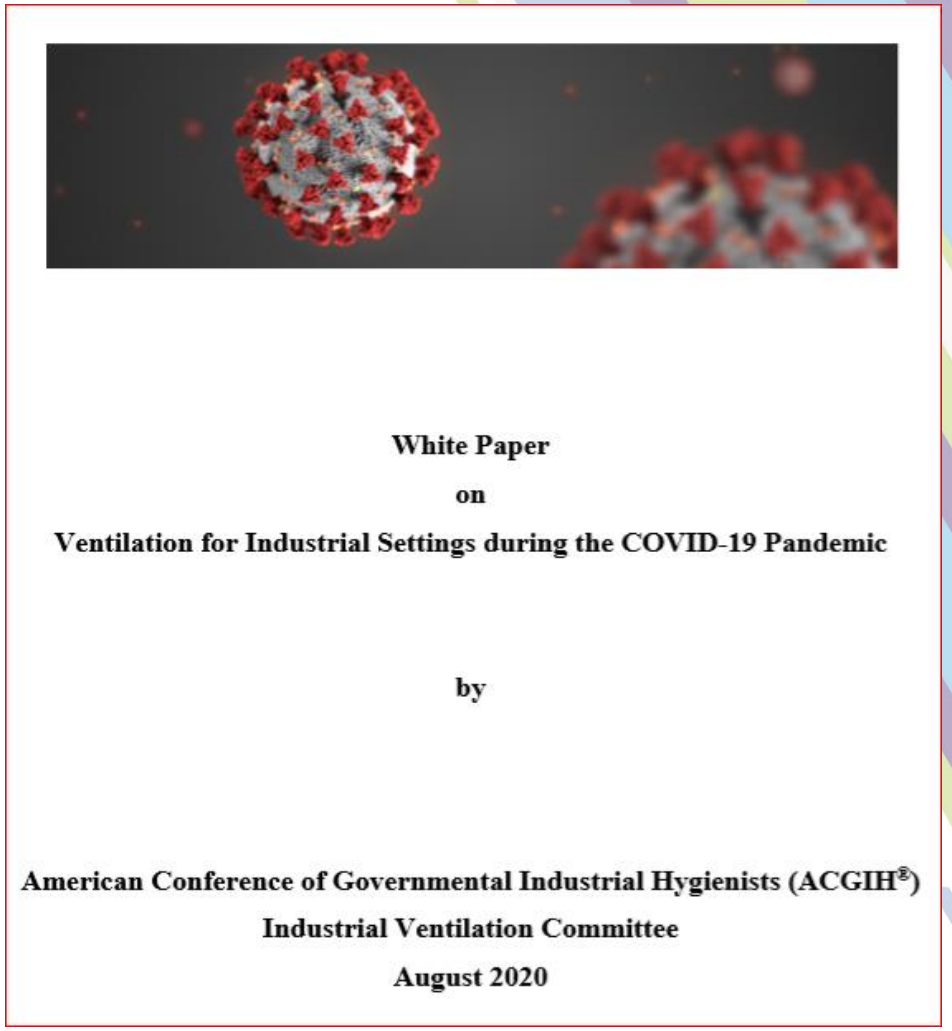
Cohorts

- 7 - Women
- 2 - YEA
- 10 - International

ASHRAE Epidemic Task Force

TC 9.2 working with ACGIH to produce a White Paper and Guideline on Ventilation for Industrial Settings during COVID 19 and other Epidemics.

ASHRAE Webinar Soon



White Paper

on

Ventilation for Industrial Settings during the COVID-19 Pandemic

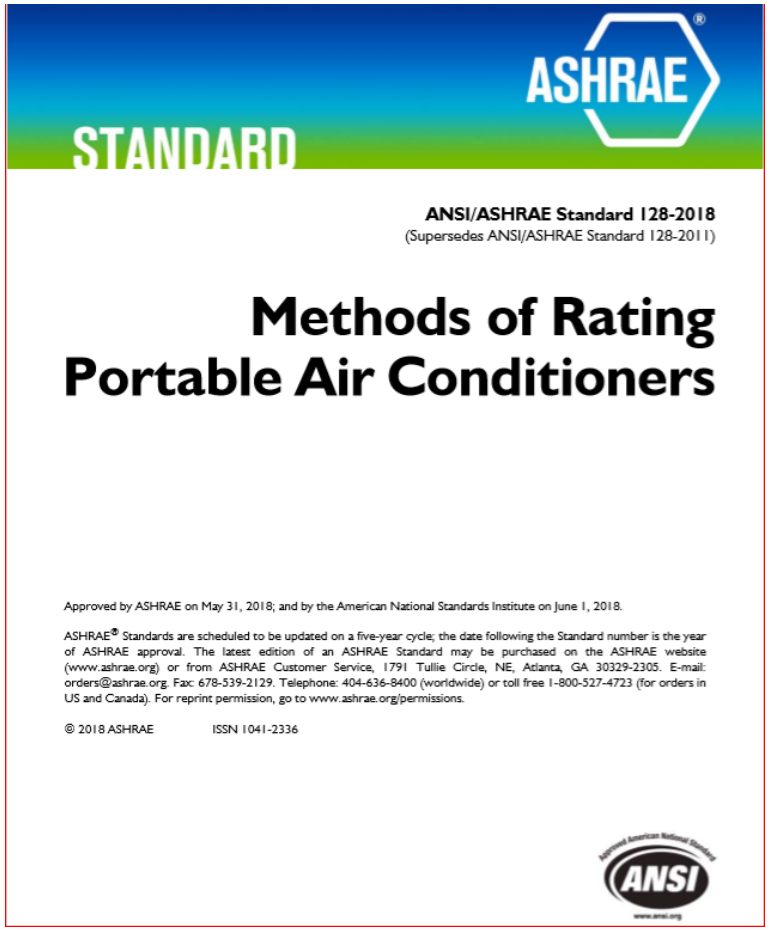
by

American Conference of Governmental Industrial Hygienists (ACGIH®)

Industrial Ventilation Committee

August 2020

TC 9.2 Related Standards



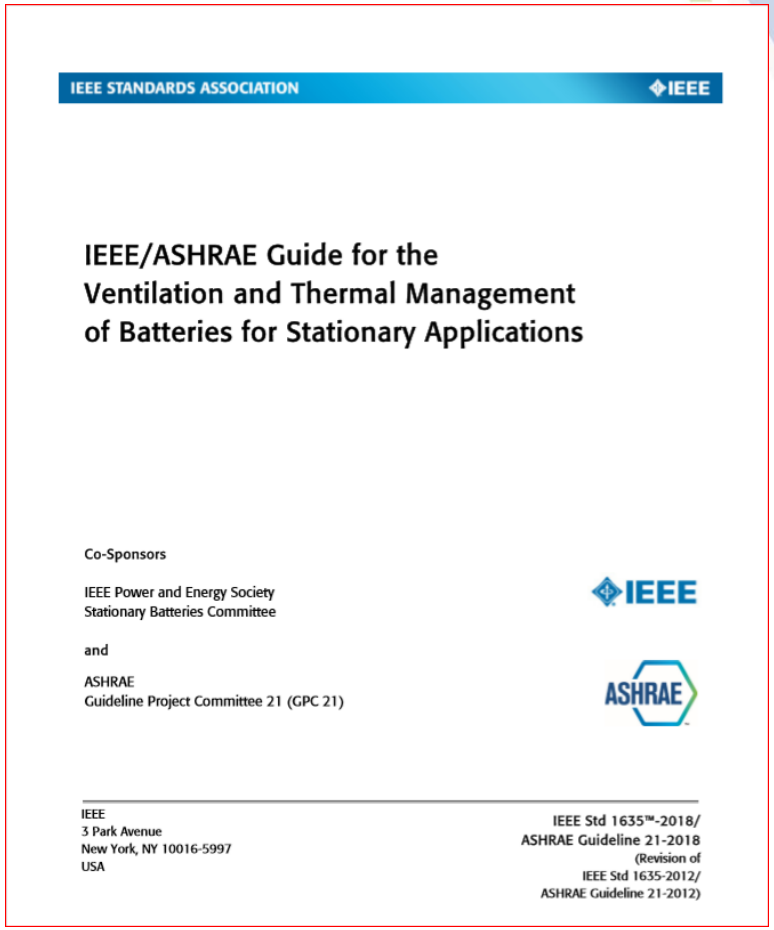
STANDARD

ANSI/ASHRAE Standard 128-2018
(Supersedes ANSI/ASHRAE Standard 128-2011)

Methods of Rating Portable Air Conditioners

Approved by ASHRAE on May 31, 2018; and by the American National Standards Institute on June 1, 2018.

 ISSN 1041-2336



IEEE STANDARDS ASSOCIATION

IEEE/ASHRAE Guide for the Ventilation and Thermal Management of Batteries for Stationary Applications

Co-Sponsors

IEEE Power and Energy Society
Stationary Batteries Committee

and

ASHRAE
Guideline Project Committee 21 (GPC 21)

IEEE
3 Park Avenue
New York, NY 10016-5997
USA

IEEE Std 1635™-2018/
ASHRAE Guideline 21-2018
(Revision of
IEEE Std 1635-2012/
ASHRAE Guideline 21-2012)

TC 9.2 Design Guides and Programs

Hazardous Spaces Design Guide

- At the printers due for print early - 2021

Oil & Gas Chapter for CCBDG

- Editing Stage due for print early to mid 2021

Oil & Gas HVAC Design Guide

- Development Stage

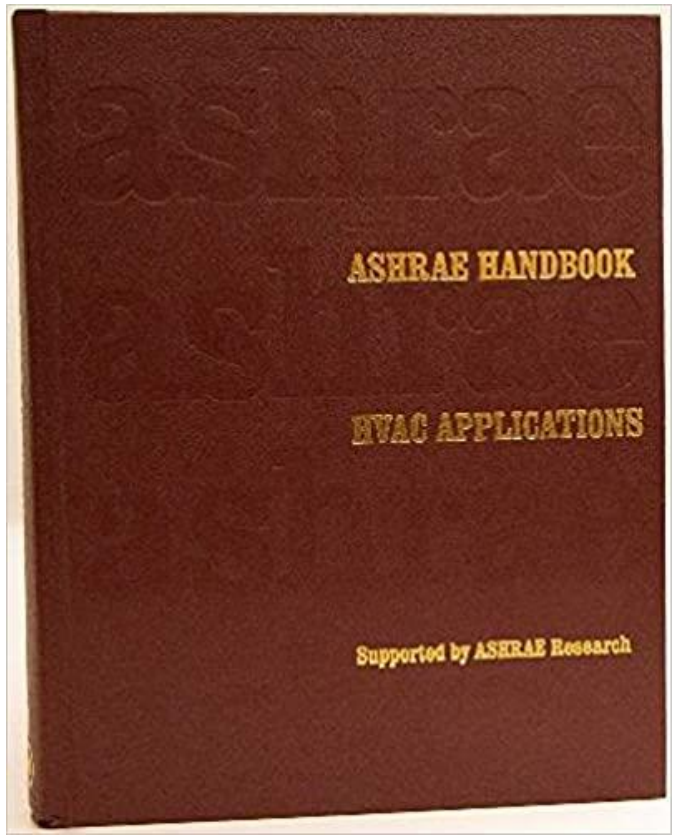
ASHRAE Epidemic Task Force

- Industrial HVAC

IEEE/ASHRAE Guideline 21R

- Being Updated to include Lithium Ion Battery Issues

TC 7.3: Handbook Chapters



- Industrial Air Conditioning
- Engine Test Facilities
- Printing Plants
- Textile Processing Plants
- Wood & paper Products
- Power Plants
- Nuclear Facilities
- Mine Facilities
- Ventilation of Industrial Environments
- Unit Ventilators & Make Up Air Units

TC 9.2 & MTG ACR Research

Evaluate the technical basis & adoption of airflow rate specifications in terms of Air Change Rate (ACR) for spaces such as cleanrooms, laboratories, patient rooms, operating rooms & other similar spaces.

TC 9.2 Sponsored Conference

August 15-18 2021 Toronto, Canada

13th International Industrial Ventilation Conference for Contaminant Control

THANK YOU!

T.C. 9.2 - Industrial Air Conditioning and Ventilation

Presenter: Erich Binder Chair: Erich Binder

Info & join: tc0902@ashrae.net & erich.binder@worley.com

TOTAL TC Involvement

- Number of international members on TC's – 645
- Number of members in Region XIV on TC's – 128
- Number of YEA members on TC's - 844
- Number of YEA members in Region XIV on TC's - 15

ASHRAE Region XIV

DISCUSSION

Opinions & Questions Welcomed

Moderator: Dimitris A. Charlambopoulos

e-mail: dimitris@ashrae.gr