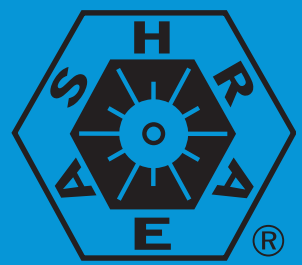


PROCLAIMING THE TRUTH

Second Edition



CELEBRATING
125
YEARS

An Illustrated History of ASHRAE

PROCLAIMING THE TRUTH

Second Edition

An Illustrated History of ASHRAE

**This publication was prepared under the auspices of
ASHRAE's Historical Committee.**

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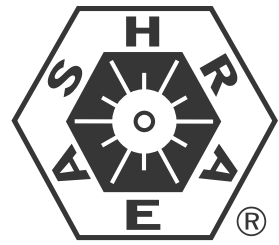
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Updates and errata for this publication will be posted on
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Completed in celebration of ASHRAE's 125th anniversary



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Dedication

To the Thermal Engineer who "...is privileged more than the historian, theologian, or poet, to consider some of the great questions of the universe. The nature of the force he is harnessing calls forth his imaginative powers."—Willis H. Carrier, 1928

"Let us have the faith that right makes might and in that faith let us always strive to do our duty as we understand it." — Abraham Lincoln, 1860, as quoted by ASHRAE President James Hill, June 1997.

Vision Statement

1995

ASHRAE

- *will be the global leader in the arts and sciences of heating, ventilation, air conditioning and refrigeration;*
- *will be the foremost, authoritative, timely and responsive source of technical and educational information, standards and guidelines; and*
- *will be the primary provider of opportunity for professional growth, recognizing and adapting to changing demographics, and embracing diversity.*

2020

A healthy and sustainable built environment for all

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Acknowledgments

The publication of the first edition of *Proclaiming the Truth* marked the centennial celebration of the founding of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, known today as ASHRAE.

Initiated by 1993–94 ASHRAE President Richard A. Charles to be a permanent record of the Society’s 100 years of progress and accomplishment, the first edition was prepared under the guidance of the ASHRAE Centennial Committee: Louis F. Flagg, chairman; David S. Butler, Sr.; Richard A. Charles; William J. Collins, Jr.; Robert W. Crosby; Richard Rooley; and Thomas J. White. Charles monitored project completion on behalf of the committee.

The second edition of *Proclaiming the Truth* was published to add ASHRAE’s progress and accomplishments from 1995 to 2020, as a commemoration of the Society’s 125th anniversary.

Frank H. Faust and John E. Jansen formed the basis of Chapters 6 and 9, respectively, written for the first edition. Manuscripts on ASHRAE history by Bernard A. Nagengast and Alfred Greenberg are sources of information found throughout the book. Review and comment on manuscripts was provided by Richard A. Charles, Mervin W. Dizenfeld, Louis F. Flagg, John C. Fox, William L. Holladay, Burgess H. Jennings, Roderick P. Kirkwood,

and J. Richard Wright. Appendix B, “The Show,” was based on an article authored by Andrew T. Boggs.

In the second edition, H. Michael Newman’s book *BACnet: The Global Standard for Building Automation and Control Networks* was a source for updating ASHRAE standards work in Chapter 4 and Thomas A. Gilbertson’s article for the Golden Gate Chapter’s newsletter on Title 24 was used to update Chapter 8. J. Richard Wright, Bruce D. Hunn, and Michael Vaughn provided their perspectives on the evolution of ASHRAE Research.

The papers from ASHRAE’s archives for the years 1895 through 1994 listed in Appendix K were selected by Louis F. Flagg, Raymond Cohen, Guy W. Gupton, George B. Hightower, Gershon Meckler, Donald E. Nichols, Joseph B. Olivieri, Ronald L. Shelton, and Hans O. Spauschus. ASHRAE Handbook Associate Editor Adele Brandstrom assisted in the preparation of the abstracts listed for each paper.

The papers for the years 1995 through 2019 were selected by Eric Sturm, Steven F. Bruning, Charles E. Henck, James E. Hill, Gordon Holness, David Knebel, Ronald Shelton, Branislav Todorovic, and David Underwood. ASHRAE Librarian Emily Sigman assisted in the shepherding of the selections.

Appendix J, which gives the reflections of Presidential Members on the Society, was assembled by Emily Sigman for the entries from 1894 to 1994. She, along with Communications and Publications Administrative Assistant Patricia Mathis, researched and gathered many of the facts and illustrations used in the book. W. Stephen Comstock assembled the reflections of Presidential Members from 1995 through 2019.

Many *ASHRAE Journal* covers are reproduced in this volume. Most were created by Lawrence H. Darrow, who was the Journal's art director from 1975

through 1994. These covers graphically portray the issues which were dealt with by the Society during these years.

Most of the content used to update *Proclaiming the Truth* to celebrate ASHRAE's 125th anniversary in 2019–2020 are from original source speeches, news reports, Board reports, and articles published in *ASHRAE Insights*. Woven together, they tell the story of ASHRAE as it entered, evolved, and prospered in the twenty-first century.

W. Stephen Comstock

Introduction

Why entitle this illustrated history of ASHRAE *Proclaiming the Truth?* To John E. Starr, the first president of The American Society of Refrigerating Engineers (ASRE), “finding the truth” was the principal responsibility of the technical society. He stated this eloquently in 1905: “The Association has a weight in any utterance which is many times greater than those of any individual. The public recognizes that such utterance was made in an arena where, if it could have been intelligently questioned or differed from, it would have undergone that ordeal then and there.”

Of The American Society of Refrigerating Engineers, he said, “We have undertaken the responsibility of speaking with authority, of finding the truth, and proclaiming it, and a critical world will hold us to our task or pass us by as unworthy.”

Starr’s words reappeared often, such as under the Society logo on its Circular No. 1, “Heat Transmission of Insulating Materials.”

To us, the phrase represents all that is good about ASHRAE. It reminds us that ASHRAE places technological advancement before commercial advantage. It reinforces the notion that the work of ASHRAE is for the benefit of the public. It tells us that ASHRAE members recognize that

their obligation to humanity is to scrutinize, to contribute, and to participate.

This resolve to do good is why the work of ASHRAE and the spirit of ASHRAE are as relevant today as was the case 125 years ago when engineers seeking technical truths formed the American Society of Heating and Ventilating Engineers (ASHVE).

James E. Hill, 1996–97 ASHRAE President, saw the good works of ASHRAE reflected in the words of Abraham Lincoln. Hill often quoted a Lincoln speech given at Cooper Union in New York City before the future U.S. president had secured the nomination of his party. “Let us have the faith that right makes might and in that faith let us always strive to do our duty as I understand it,” Lincoln said. Hill used that phrase to describe ASHRAE. He noted that within a year of ASHRAE’s founding the Society formed a committee to develop a standard of innovation for New York City schools.

The engineers of that long-ago time showed remarkable resolve and foresight. Those who followed, to paraphrase 1994–95 ASHRAE President Billy R. Manning, have “Built on the Shoulders of Giants.” Their work continues. This record of accomplishment, as chronicled in the pages which follow, has improved immeasurably the quality of life.

There are several notes that will prove valuable to readers as they ponder the beginnings and growth of ASHRAE:

Both ASHVE and ASRE had their first annual meetings at the American Society of Mechanical Engineering offices. ASHVE refers to the meeting room as the “chamber” and ASRE refers to the meeting room as the “hall.” It is one and the same as near as we can figure.

Neither organization used an acronym for its name until sometime after its founding. Actually, the use of acronyms in place of organizational names had not yet been invented. At its birth, ASHVE was referred to as “this society” in its Transactions, while ASRE was called “the Society.” By the 1930s, the terms A.S.H.V.E. and A.S.R.E. had begun to appear with greater frequency in the literature. In the 1940s, use of periods fell out of general favor. In some eras, the “The” preceding “American” was considered a formal part of the name by both organizations. Usually, but not always, members of both organizations capitalized the “S” when writing of the “Society.” Most often in this book, references were used in each chapter that were appropriate for the time to which they refer. But in some cases, ease of reading required use of acronyms. No doubt, the casual reader will consider this use of capitalization and acronyms inconsistent and in error. Hopefully, the choices illustrate the variety of styles used.

The ASHVE research laboratory was called the Research Bureau, perhaps because it was first located at the U.S. Bureau of Mines. The committee charged with monitoring research was called the Committee on Research Bureau. Later, the committee became known as the Committee on Research.

The dedication “To the Thermal Engineer” that appeared in the first edition of this book is taken from an address delivered by Willis H. Carrier in 1928. Carrier’s description of a “thermal engineer” is appropriate today, and all who contributed to this book—

first or second edition—share his respect for the profession.

Enjoy your trip through time. If along the way you find errors or omissions, let ASHRAE know. While the research was painstaking and exhaustive, some readers no doubt will recall a different memory or will be able to provide an undiscovered fact. But you have the historian’s assurance that any communicated correction will be stored safely away for those who will prepare ASHRAE’s 150th anniversary publication in 2044. Errors and significant omissions will also be posted on the Internet—for however long there is an ASHRAE home page and an Internet.

Disclaimer for the ASHRAE Story

ASHRAE has accomplished much more than the number of pages allotted for this publication allows. ASHRAE’s story has been written by the hundreds of thousands of volunteers who over the course of the past 125 years have served on committees, participated in chapters, and used ASHRAE published literature in their work and studies. They are the authors of the ASHRAE story. That story continues to be written today, literally 24/7 as ASHRAE membership and influence expands globally.

Consider this historical work a collection of stories driven by vision, connected by threads created by the needs of humankind, and woven by ASHRAE volunteers who dedicate their work to improve the quality of life.

Most of the words in *Proclaiming the Truth*, especially those in the second edition, which adds chronicles of ASHRAE from 1995 through 2020, are words that were spoken at the time. There were more voices than could be accommodated, more needs than could be recorded, and most importantly, more solutions than could be cited.

W. Stephen Comstock