

is presented in the 1939 edition. Fundamental principles of combustion together with related factors dealing with flame temperature and proper air requirements are given special consideration. The latest current information on classification of all types of fuels is given along with suggested methods of firing to obtain optimum results. Another chapter closely related to this subject has been rewritten this year on Heat and Fuel Utilization. Methods are outlined for estimating fuel consumption based on calculated heat losses and degree-day factors. Charts are included for coal, oil and gas whereby fuel burning rates may be estimated for various design loads and operating efficiencies.

Other chapters which have been rewritten for the 17th edition deal with Air, Water and Steam, Cooling Load, Radiators and Gravity Convectors, Steam Heating Systems, Piping for Steam Heating Systems, Mechanical Warm Air Furnace Systems, Unit Heaters, Ventilators, Air Conditioning and Cooling Units, Natural Ventilation and District Heating.

Minor changes were made in the chapters on Heat Transmission Coefficients and Tables, Air Leakage, Automatic Fuel Burning Equipment, Air Distribution and Automatic Control.

The Bulkeley Psychrometric Chart will again be found in a convenient envelope attached to the inside back cover thus making it easily accessible for performing psychrometric calculations. The Problems in Practice have been continued with new and practical solutions to expand the text material given in each of the 45 chapters. A revised table giving the weights of saturated and partially saturated air for various psychrometric pressures has been added this year to bring the data in conformity with government standards. The degree-day table appearing in the chapter on Heat and Fuel Utilization has been corrected and brought up-to-date based on more recent Weather Bureau data.

The increase in usage of The GUIDE as a text book in many universities, engineering and technical schools for student instruction indicates its wide acceptance as a standard authority in the field of heating, ventilating and air conditioning.

The manufacturers have cooperated fully to make their information useful in the Catalog Data Section so that the reader can apply it effectively to the selection of materials or equipment to be used in general design. The Committee appreciates the aid of those progressive manufacturers who have assisted in this cooperative enterprise to advance the art of heating, ventilating and air conditioning which so vitally affects the comfort and health of everyone. In 1939 it will be possible to distribute 13,000 copies of The GUIDE to various types of readers and it is extremely gratifying that a large number of manufacturers recognize the effective service which The GUIDE accomplishes as an advertising medium.

For the user who desires to obtain reliable data in convenient form it is felt that a careful perusal of both the text and catalog data pages of this volume will emphasize its brevity and simplicity of presentation.

The Committee releases this 17th edition of 13,000 copies with the sincere hope that it will receive the same enthusiastic reception that was accorded to its predecessors.

Albert Buenger, Chairman

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EDITORIAL ACKNOWLEDGMENT

EXTENDING over 17 years the HEATING, VENTILATING, AIR CONDITIONING GUIDE, published by the AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, has maintained an enviable record as the authoritative engineering reference volume of the profession. This recognition of world-wide acceptance has been possible because of the willingness of hundreds of technically trained engineers to contribute freely from their knowledge and practical experience for the benefit of the entire profession and allied industries.

It is with deep feeling of appreciation that the Guide Publication Committee acknowledges the work of the following individuals who have assisted in the preparation of the 1939 edition and it also commends those contributors who have previously prepared a firm foundation for the addition of new information.

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Individuals who have adopted the GUIDE as their standard reference volume and members of the Society are deeply indebted to those engineers who have assisted in the preparation of this 17th edition and the Guide Publication Committee wishes to pay tribute for this loyal cooperation and devotion to public service in advancing the art of heating, ventilating and air conditioning engineering.

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