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PREFACE TO THE 17th EDITION

THE 1939 edition of the Heating, Ventilating, Air Conditioning Guide contains the largest Technical Data Section of any of the annual reference volumes published by the American Society of Heating and Ventilating Engineers to serve the profession and industry. With 856 pages of text material this 17th edition of The Guide reflects the outstanding research and engineering advancements which have taken place in this field of engineering since the first Guide made its appearance in 1922.

The Research Laboratory of the Society and cooperating universities have contributed much toward the advancement of the science of heating, ventilating and air conditioning in 1938. All of these developments have been summarized and added to this volume in order to maintain the original conception of The Guide, whereby only scientific and current investigative results are presented which may be of practical value to design engineers.

Basic and fundamental data have been retained from previous editions but in this volume a concentrated effort has been made by the Committee to condense and combine material throughout the text. Those chapters dealing with central systems for heating, humidifying, cooling and dehumidifying have been carefully reviewed and a completely new chapter has been prepared which incorporates all of the essential material from other chapters. The title of this chapter is, Central Systems for Comfort Air Conditioning, and the material is presented in such a manner as to apply directly to the requirements set forth in the application Code of Minimum Requirements for Comfort Air Conditioning which was adopted by the Society in January, 1938. References are given in this material to other chapters which deal more specifically with the design of particular equipment and consequently this new chapter may serve as a basic guide for the design of all comfort air conditioning installations.

A subject which has not heretofore received special attention in previous editions of The Guide is information dealing with heat transfer surface coils for summer and winter applications. The Committee presents in this edition a chapter which is intended to give the latest information which is available on this type of equipment. Details are given describing the conventional construction and arrangement of heating and cooling coils with suggestions for typical flow arrangements of the circulating media. Due to the wide variety of methods now in use for the selection of heat transfer coils it is impossible to give specific recommendations for the proper choice of coils until such time as additional research findings are reported and uniform standardization is adopted by the industry. Charts are given which indicate the performance of coils operating under varying design load and equipment conditions.

The problem of fuels and their combustion was recognized by the Committee this year as an important factor to the heating engineer and as a consequence a completely revised chapter on Combustion and Fuels