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PREFACE TO THE 21st EDITION

THE 21st edition of the HEATING, VENTILATING, AIR CONDITIONING GUIDE 1943 has been prepared under the stress of war time conditions. While recognizing the changes which have been made from standard practices, due to these war time conditions, the Guide Publication Committee nevertheless has retained in the various chapters the high standards and basic information that have characterized former editions. Departures from these standard practices and changes in engineering methods and design, brought about by war conditions, are outlined in a new supplement in this edition entitled, Emergency War Practices.

In accordance with the policies adopted for the issuance of a new Guide, approximately two-thirds of the forty-seven former chapters have been reviewed and of these twenty were completely rewritten with minor revisions to eight others.

Chapter 48 has been added, entitled Abbreviations, Symbols, Standards, and includes a new compilation of state laws and codes covering design and installation requirements relating to the heating, ventilating or air conditioning of buildings.

The chapter on Thermodynamics of Air and Water Mixtures has been expanded to include some new information on pressure and temperature relations at various altitudes above or below sea level, as well as some additional examples dealing with the cooling and heating load. The material covered in the chapter on Heat Transmission Coefficients has been enlarged to include some new data on basement floor and basement wall coefficients, which were developed by recent A.S.H.V.E. Research Laboratory investigations.

The Heating Load chapter has been completely rewritten and a new design temperature zone map has been added. Tabular data giving heat gain from various sources are a new feature of the chapter on Cooling Load, and in addition the illustrative example at the end of the chapter has been expanded. Chapter 11 has been given a new title, Estimating Fuel Consumption, and the material in this chapter has been amplified in order to clarify the subject of degree-days in calculating fuel estimates.

The chapter on Radiators and Convectors was completely rewritten and condensed so that recent experimental data could be added. Similarly, the material dealing with Hot Water Heating Systems and Piping is new, with charts, tables and a group of graded examples added to assist the engineer in designing a system of this type. Minor revisions were made