

FOREWORD

At the request of the Industrial Ventilation and Power Industry Committee, Dr. Michael C. Soteriades, who did all the theoretical work for the previous edition, reviewed and updated the material for this new edition.

Although the vast majority of the original material has been reproduced here, some of the major differences with the previous edition are:

- The theoretical basis for the selection tables has been reviewed and expanded to make it more useful and easier to follow.
- The reinforcement criteria for the openings in the stack have been reviewed and clarified, including more detailed illustrations and drawings.
- Consistent with the original recommendation that when available the "undampened" designs have preference over the "dampened" designs, the new edition has eliminated "dampened" solutions when "undampened" designs are also available for the same geometry.
- A new chapter has been added providing conversion factors and guidance for working in the metric (SI) system. In this respect we have deviated from SMACNA's policy of reproducing all numerical data in both the English (I-P) and metric (SI) systems. This is because of the unique circumstance that the design of stacks involves consideration of wind-induced resonant vibration, which makes any deviation from the calculated metal thickness a potential risk. This is true even when going to a greater thickness, which in most other design situations is considered a safe and conservative procedure.
- The new edition has been reformatted per SMACNA's *Manual of Style*, which governs the presentation of all SMACNA publications to create a uniform look and feel.

