

FOREWORD

These duct construction standards are intended for use by contractors, fabricators, and designers of air pollution control, pneumatic conveyance, and industrial ventilation systems.

The 1977 edition of these standards was the first publication dealing with the selection of duct gage and reinforcing systems for industrial duct applications. While the first edition served industry very well for many years, technology has continued to move forward, and the Industrial Ventilation and Power Industry Task Force of SMACNA has responded to our membership's request to expand and update the original text. We are taking their request one step further by restructuring the manual and providing supportive software to make the design process more "user friendly." One of the main considerations in the development of the new standards is the opportunity to create a software program for personal computers that can greatly expand the computational capability of the user and permits an almost unlimited examination of different construction details and design solutions. A comprehensive review of the old procedures was completed and modifications implemented to update the technology and make the design procedures compatible with the computerization effort.

While the new procedures include many of the same assumptions as the original work, a number of new features have been added:

- Microsoft™ Windows® based calculation software to expedite selection of construction details (software sold separately)
- Four different types of carbon steel and two different types of galvanized steel
- Seven different types of stainless steel alloys
- Four different types of aluminum alloys
- Design capability for high temperature systems up to 800°F (427°C), and higher with design review by a specialized professional
- Consideration of wind, snow, ice, and maintenance loads
- Expanded tables to include ducts to 96 in. (2440 mm)
- Expanded tables to include material up to ½ in. (12.7 mm) thickness
- All data presented in both English (customary) and Metric (SI) units
- Expanded data for the selection of duct supports
- Chapter on the use of spiral lockseam pipe in industrial applications
- Accepted industry practice for round industrial ducts
- New Duct Class 5 for systems handling corrosives
- New chapter on welding
- New guide specification for the fabrication and installation of industrial duct systems
- Chapter of practical examples with step-by-step calculation instructions
- Chapter of flow charts to guide the user in design process

The Industrial Ventilation and Power Industry Task Force is greatly indebted to Dr. Michael C. Soteriades, who did the original work for the first edition and also provided the professional consultation and analysis necessary for the development of this new and expanded publication.

SHEET METAL AND AIR CONDITIONING CONTRACTORS'
NATIONAL ASSOCIATION, INC.

