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Nota di contenuto	VENTILATION FOR CONTROL OF THE WORK ENVIRONMENT; CONTENTS; List of Units; Preface; 1 Ventilation for Control; 1.1 Control Options; 1.2 Ventilation for Control of Air Contaminants; 1.3 Ventilation Applications; 1.4 Case Studies; 1.5 Summary; References; 2 Principles of Airflow; 2.1 Airflow; 2.2 Density; 2.3 Continuity Relation; 2.4 Pressure; 2.4.1 Pressure Units; 2.4.2 Types of Pressure; 2.5 Head; 2.6 Elevation; 2.7 Pressure Relationships; 2.7.1 Reynolds Number; 2.8 Losses; 2.8.1 Frictional Losses; 2.8.2 Shock Losses; 2.9 Losses in Fittings; 2.9.1 Expansions; 2.9.2 Contractions; 2.9.3 Elbows 2.9.4 Branch Entries (Junctions)2.10 Summary; List of Symbols; Problems; 3 Airflow Measurement Techniques; 3.1 Measurement of Velocity by Pitot-Static Tube; 3.1.1 Pressure Measurements; 3.1.2 Velocity Profile in a Duct; 3.1.3 Pitot-Static Traverse; 3.1.4 Application of the Pitot-Static Tube and Potential Errors; 3.2 Mechanical Devices; 3.2.1 Rotating Vane Anemometers; 3.2.2 Deflecting Vane Anemometers

(Velometer); 3.2.3 Bridled Vane Anemometers; 3.3 Heated-Element Anemometers; 3.4 Other Devices; 3.4.1 Vortex Shedding Anemometers; 3.4.2 Orifice Meters; 3.4.3 Venturi Meters
3.5 Hood Static Pressure Method
3.6 Calibration of Instruments; 3.7 Observation of Airflow Patterns with Visible Tracers; 3.7.1 Tracer Design; 3.7.2 Application of Visible Tracers; List of Symbols; References; Manufacturers of Airflow Measuring Instruments; Manufacturers of Smoke Tubes; Problems; 4 General Exhaust Ventilation; 4.1 Limitations of Application; 4.2 Equations for General Exhaust Ventilation; 4.3 Variations in Generation Rate; 4.4 Mixing; 4.5 Inlet/Outlet Locations; 4.6 Other Factors; 4.7 Comparison of General and Local Exhaust; List of Symbols; References; Problems; 5 Hood Design
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7.1 Design of Chemical Laboratory Hoods

Sommario/riassunto

The second edition of Ventilation Control of the Work Environment incorporates changes in the field of industrial hygiene since the first edition was published in 1982. Integrating feedback from students and professionals, the new edition includes problems sets for each chapter and updated information on the modeling of exhaust ventilation systems, and thus assures the continuation of the book's role as the primary industry textbook. This revised text includes a large amount of material on HVAC systems, and has been updated to reflect the changes in the Ventilation Manual published by ACGIH
