

BIBLIOGRAPHY

References on Noise Control: General Texts, Handbooks,
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NOISE CONTROL: GENERAL TEXTS, HANDBOOKS, AND MANUALS

Control of Noise, 3rd ed. Des Plaines, IL: American Foundrymen's Society, 1972.

The engineering section of this manual was prepared by an experienced consultant. It is written without equations, but with many charts, graphs, and tables. Although the many examples are taken from foundry technology, the control techniques are quite general in application. There are many compact case histories, together with data on the noise reductions obtained. The point of view is very practical.

Fundamentals of Industrial Noise Control, L.H. Bell. Trumbull, CT: Harmony Publications, 1973.

This practical book is written from the point of view of the practicing noise control engineer/consultant. A minimum amount of mathematics is used; many examples and exercises are given. The chapters on enclosures, fans, gears, silencers, and vibration control are quite useful. A feature of the book is the compact case histories, for which photographs and drawings amply describe the techniques used.

Guidelines to Noise, Amer. Petrol. Inst., Washington, D.C.: Medical Research Report EA 7301, 1973.

This commissioned report summarizes measurement instruments and procedures, explicit noise reduction techniques, new plant design for low noise, and source characteristics. The appendices have detailed information on noise control materials, levels from machinery, and addresses of suppliers of noise control materials.

Handbook of Acoustic Noise Control, W.A. Rosenblith and K.N. Stevens. WAD Tech. Publ. No. 52-204, 1953.

Handbook of Noise Control, C.M. Harris, ed. New York, NY: McGraw-Hill, 1957.

Although old, this is still the fundamental reference handbook for the noise control engineer. Of particular interest are these sections: 13, vibration isolation; 14, vibration damping; 21, acoustical filters and mufflers; 23, gear noise; 24, bearing noise; 25, fan noise; 26, noise in water and steam systems; 27, heating and ventilating system noise; and 30, electric motor and generator noise. Of course, recent developments in acoustical materials and measuring equipment are missing, but the fundamentals are unchanged.

Handbook of Noise Measurement, 7th ed., A.P.G. Peterson and E.E. Gross. Concord, MA: GenRad, Inc., 1972.

This book is an excellent source of data on measurement of sound pressure and calculation of sound power levels. Valuable details are given on sound analysis techniques, characteristics of many types of acoustical instruments, and a summary of noise reduction procedures. An especially useful section covers precautions to be observed to ensure that valid data are required.

Industrial Noise Control Handbook, P.N. and P.P. Cheremisinoff, eds. Ann Arbor.: Ann Arbor Science Pub., Inc. 1977.

This book is a practical guide to industrial noise and vibration control. The text is well illustrated and discusses the important topics with a minimum of mathematical treatment. The text suffers a bit from imbalance - some topics are discussed only briefly, whereas others are discussed in depth. Information contained in the detailed sections, particularly those on the use of glass and lead materials, contains a good deal of valuable data. The reader will benefit from the discussions on noise legislation and personal safety devices. This book also contains a number of illustrative case histories pertaining to, for example, electric utility and refinery noise, paper rewinders, jet engine test cells, and several other common noise problems.

Industrial Noise Manual, 2nd ed. Detroit: Amer. Ind. Hyg. Assoc., 1966.

Although the instrument section is outdated, the described measurement techniques are still applicable. Considerable data are given on ear plugs and muffs. The chapter on engineering control is very practical; it is copiously illustrated and describes many useful techniques. A most valuable section on examples presents compact, illustrated case histories in which the noise reduction obtained is given, usually with octave-band spectra.

Machinery Acoustics, G.M. Diehl. New York, NY: John Wiley & Sons, 1973.

The chief contribution of this book is a detailed description of practical techniques, backed by analysis; for the "in situ" measurements required for calculating sound power. Every professional noise control engineer should be aware of these techniques. The sections on noise sources and reduction procedures have a great deal of directly useful information, especially for enclosure design.

Noise Control, R. Taylor, ed. Rupert Taylor and Partners Ltd., 114 Westbourne Grove, London, W2 4UP, England.

Noise Control Approaches, M.V. Crocker. Proc. Inter-Noise 72 Tutorial (1972).

Excellent summary of procedures.

Noise and Its Control, Pollut. Eng.

This reprint of very readable 1973 articles summarizes characteristics of machine noise sources and noise control techniques. It will provide a general background to the problems.

Noise and Vibration Control, L.L. Beranek, ed. New York, NY: McGraw-Hill, 1971.

This is the major modern reference source for the noise control engineer. The treatment is often mathematical, but there are plenty of illustrative worked-out problems. Especially useful are the treatments of transmission loss of simple and complex panels; mufflers and silencers; sound in rooms; vibration isolation; and sound power measurement.

Noise and Vibration Control for Industrialists. S.A. Petruszewicz and D.K. Longmore, eds. New York: Amer. Elsevier Publishing Co. Inc., 1974.

This book contains a good deal of technical information on acoustics, noise control, and especially vibration and vibration control. However, there is also much clearly written practical advice in the text on principles of noise and vibration control and measurement techniques. Readers may find the sections on criteria and hearing conservation particularly enlightening and useful. A case history for new plant installation is included as the final section of the text.

Secrets of Noise Control, A. Thumann and R.K. Miller. Atlanta: Fairmont Press, 1974.

This book presents much practical noise control information in graphs and tables, with a minimum of mathematics. Especially useful are data on cost estimating, a listing of suppliers of noise control products, means of source location, silencers, and check lists for management of noise control. There are many useful worked-out problems. A comprehensive list is supplied for all the standard methods of measurement that a professional noise control engineer should use.

Sound, Noise, and Vibration Control, L.F. Yerges. New York, NY: Van Nostrand Reinhold, 1969.

This practical book has almost no mathematics and relies almost completely on tables, charts, and graphs for its data. The author, an experienced acoustical consultant, provides a great deal of directly useful information on materials selection, noise characteristics of machinery, design of noise control means, and translation of subjective reactions to noise into causes and solutions.

What to Do About Noise, T.J. Schultz. Washington, D.C.: U.S. Department of Housing and Urban Development, 1973. Also,

Report No. 2549, Bolt Beranek and Newman Inc., 50 Moulton Street,
Cambridge, MA 02138.

Criteria for a Recommended Standard: Occupational Exposure to
Noise, Department of Health Education and Welfare, NIOSH
No. 73-11001, August 14, 1972.

NOISE CONTROL: GENERAL ARTICLES

"Acoustic Materials," W.G. Hyzer. Res./Develop., February 1977, pp. 74-79.

"Acoustical Treatment of Plant Facilities," H.G. Peters. Proc. Noise-Con '73, 15-17 October 1973, Washington, D.C., pp. 338-342.

"A Maintenance Guide to Solving Major Noise Problems," J.W. Stormont and H.K. Pelton. Maintenance Eng., pp. 18-22.

"Basic Concepts of Plant Noise Control," C.H. Allen and R.C. Ison. Plant Eng., 21 August 1975, pp. 73-75.

"Consider Composites to Cut and Control Cacophony," K.H. Miska. Mater. Eng., September 1975, pp. 82-84.

"Control of Environmental Noise," P. Jensen. Air Pollution Control Assoc., December 1973, pp. 1028-1034.

"Controlling Industrial Noise, Part 3: Energy Controls," C.H. Wick. Manufactur. Eng. and Manage., May 1973, pp. 35-39.

"Controlling Industrial Noise, Part 4: Acoustic Materials and Enclosures," Manufactur. Eng. and Manage., June 1973, pp. 30-33.

"Controlling In-Plant Noise," Automation, April 1974, pp. 86-90.

"Controlling Noise in Future Building Construction," W.H. Brueggeman and C.L. Meteer. SPE NATEC 1972, Plastics in Building Construction, pp. 192-203.

"Controlling Plant Noise Using Isolation and Absorption Techniques," E.A. Wetherill. Western Manufacturing, March 1971, pp. 20-22.

"Cost-Effectiveness Approach to Machinery Noise Control," L.F. Yerges. Sound and Vib., July 1974, pp. 30-32.

"Downing the Plant's Din," Chem. Eng., 24 December 1973, pp. 30-32.

"Engineering a Quiet Plant," S.C. Lou. Amer. Petrol. Inst., Div. of Refining: Midyear Meeting, TX. Rep. No. 08-70, 13 May 1970.

"Environmental Effects on Machine Noise in Food Processing Industries," G.M. Diehl. Compressed Air Mag., April 1976, pp. 6-9.

"Foreign Noise Research in Machinery/Construction Equipment." Office of Noise Abatement and Control, USEPA, Washington, D.C., December 1977.

"Four Ways Materials Combat Noise Pollution," K.H. Miska. Mater. Eng., June 1974.

- "Fundamentals of Noise Control," L.N. Miller. Paper No. 45d at the 74th Nat. Mtg. Amer. Instit. Chem. Eng., 3 March 1973, New Orleans, LA.
- "Guidelines for Noise and Vibration Control," L.F. Yerges. Sound and Vib., August 1973, pp. 18-21.
- "How to Control Industrial Noise," A.M. Teplitzky. Automation, March 1970, pp. 70-74.
- "Industrial Noise Control: Past, Present, and Future," W.S. Gatley, Mech. Eng., April 1971, pp. 29-37.
- "Interdisciplinary Plant Noise Control," A. Thumann. Chem. Eng., August 1974, pp. 120-124.
- "Machine Enclosures Versus Personnel Shelters," J.R. Yerges and A.J. Morris. Sound and Vib., May 1975, pp. 36-38.
- "Machine Noise Analysis and Reduction," T.D. Miller. Sound and Vib., March 1967, pp. 8-14.
- "Mechanical Engineering Noise and Vibration Control," L.F. Yerges.
- "Materials and Methods for Noise Control," P.N. Cheremisinoff. Pollut. Eng., October 1974, pp. 22-30.
- "Noise and Control," R.L. Lowery, Mech. Eng., June 1975, pp. 26-31.
- "Noise and Its Control," Environmental handbook series reprinted and available from Pollut. Eng.
- "Noise and OSHA - Part 1," H. C. Lawrence. Design News, 3 March 1975, pp. 59-74.
- "Noise and OSHA - Part 2," H.C. Lawrence. Design News, 17 March 1975, pp. 61-64.
- "Noise Abatement Engineering Design for 90 dBA," F.S. Jana. ASME '73 IPWR-7.
- "Noise Abatement at the Job Site: A Guide to Do-It-Yourself Action," A.W. Lowe. CM&E, April 1975.
- "Noise Control Materials," P.N. Cheremisinoff. Pollut. Eng., November 1975, pp. 22-28.
- "Noise Control: Programs in Place of Rhetoric." Occup. Hazards, July 1971, pp. 39-43.
- "Noise Reduction by Design - An Alternative to Machinery Noise Control," R.H. Lyon, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Reduction in Machinery," G.J. Sanders. Noise Contr., November 1957, pp. 29-37.

"Noise - The Third Pollution," J.M. Handley. Ind. Acoust. Co. Bulletin No. 6.0011.0, Bronx, NY.

"Noise in the Workplace," B. Lincoln. Pollut. Monitor.

"Practical Design of Machinery Foundations for Vibration and Noise Control," H.T. Miller, G.E. Warnaka, and J.M. Zalas. Proc. Inter-Noise '72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"Prescription for Plant Environment; Detect, Measure, and Control," Occup. Hazards Exec. Rep., Spring 1974, pp. 35-42.

"Put Your Noise Problems in a Box," V. Pace. Calif. Ind., July 1972.

"Relating Work Place Noise to Machinery, Noise Emission Levels," D.R. Pejaver. Nat. Conf. on Power Trans., 1976. pp. 263-282.

"Solutions to Solving Noise Problems," Maintenance Eng., June 1973, pp. 28-35.

"Stop Plant Noise at the Source or Along the Way," C.L. Meteer. Automation, July 1974, pp. 58-61.

"The ASF Handbook: Noise Control Principles and Applications," Stig Ingemansson, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Techniques for Control of Machine Tool Noise," H. Tipton. Pollut. Eng., March 1976.

"Techniques for Reducing Machinery Noise," T.D. Agne. Pollut. Eng., September/October 1971.

"The Languages of Acoustic Materials," J. Duda. Ind. Acoust. Co. Bulletin No. 60012.0, Bronx, NY.

"Turn the Noise Down!" L.F. Yerges. Oil and Gas J., 8 January 1973.

"Vibration-Structureborne Noise Control," L.L. Eberhart. ASHRAE, May 1966.

"What You Should Know About Industrial Noise," N.R. Dotti. Pollut. Eng. Yrbk. and Prod. Ref. Guide 1976, pp. 140-143.

"When OSHA Calls, Will Your Plant Be Quiet?" C.L. Meteer. Plastics World, February 1974.

"What You Must Do About Controlling Noise," Mod. Mater. Handling, February 1974, pp. 44-49.

"You Can Reduce Plant Noise," R.K. Miller. Food Eng., March 1972.

NOISE CONTROL: INDUSTRY SPECIFIC

Chemical and Process Industry

"Criteria and Design Specifications for Plant Noise Control," J.L. DeBiase. Sound and Vib., Vol. 6, No. 9, September 1972.

Good listing of sources, control procedures. Also where to measure OSHA levels.

"Environmental Noise Control in the Petroleum Industry," R.J. Davis, Stichting Concave, March 1968, The Hague, Netherlands.

"Noise Abatement in Process Plants," S.H. Judd. Chem. Eng., 11 January 1971, pp. 139-145.

"Noise Control Design for Process Plants," S.C. Lou. Chem. Eng., 26 November 1973, pp. 77-82.

"Noise Control in the Chemical Industry," J. Erskine. IEEE Acoustic Noise and Its Control, 1967.

"Noise Control in the Petroleum and Chemical Industries," R.D. Bruce and R.E. Werchan, Chemical Engineering Progress, August 1975, pp. 56-59.

"Noise Control of High Volume Gas Handling Plants," V.H. Hill. AIHAJ, February 1974, pp. 107-111.

"Noise Control: Problem Plant Noise Can be Controlled," R.E. Werchan and R.D. Bruce, Chemical Engineering Progress, October 1973, pp. 51-55.

"Noise - How to Reduce the Noise Hazard," R. Douglas, SIAS. Mech. Eng., October 1969, pp. 26-29.

"Noise Troublemakers are Identified in Refining," J.G. Seebold. Oil and Gas J., 15 January 1973.

"Process Plant Noise Control," J.G. Seebold. Sound and Vib., June 1973, pp. 16-19.

"Refinery Auxiliary Stack Redesign to Eliminate Induced Resonant Tone," A.S. Hersh et al. Proc. Noise-Con '73: 441.

Many small changes, including avoiding turbulence, are described.

Food Processing Industry

"American Can Company's 'Close-In' Noise Control Enclosure Program," W.H. Croasdale, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Coors Container Noise Control Program," W.A. Sedgeley, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Abatement in Food Industry," H. Elvhammar, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Noise Control Design Guide for the Chocolate Manufacturers Assoc. C.R. Jokel, P. Jensen, to be published in 1978. Also, Report No. 3725, Bolt Beranek and Newman Inc., Cambridge, MA 02138.

Noise Control Design Guide for Food Processors, B.A. Kugler, K. Niemic, L.D. Pope, J.W. Wilby. Northwest Food Processors Assoc. Portland, OR, 1975.

Noise Control Solutions for the Food Products Industry, R.K. Miller and Associates, Inc. Prepared for the Southeast Acoustics Institute. 1977 Engineering Report Series 882. Rhodes Haverty Building, Atlanta, GA 30303.

Text provides overview of particular details of noise control of concern to food processors (e.g., sanitary requirements) and data and solutions to specific noise problems for the various kinds of food processing industry. Scattered throughout the text are useful notes on acoustic principles and sources of noise control products. The report includes results of a literature search on noise control in food plants in Ch. 5.

Foundry Industry

"Controlling Foundry Noise," G. Warnaka. Foundry M&T, December 1974.

"Divide and Conquer Your Noise Problems," W.M. Ihde. Foundry M&T.

"Foundry Noise Control," R. Hounscome. Noise Contr. and Insulation, Vol. 8, No. 3, March 1977.

"Noise Control of Forging Plant," M. Matsui, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noisy Foundry Operations Quieted by Careful Engineering," J. Volante. Pollut. Eng., Vol. 9, No. 4, April 1977, pp. 36-37.

Metal Working Industry

Workshop on the Control of Metal Sawing Noise in the Aluminum Industry, the Aluminum Assoc. Inc. from Metal Sawing Noise Control, Chicago, IL. June 9-10, 1976.

"Noise in Stamping," R.D. Bruce. Stamping/Diemaking, November/December, 1970, pp. 64-69.

Mining Industry

"Noise Control," Proc. of Bureau of Mines Technology Transfer Seminar, Information Circular 8686, Pittsburgh, PA, 22 June 1975.

Power Industry

"Community Noise Emissions from Enclosed Electric Power Plant," A.M. Teplitzky. Noise Contr. Eng., Vol. 6, No. 1, January/February 1976.

Electric Power Plant Environmental Noise Guide, L.N. Miller, E.W. Wood, R.M. Hoover, A.R. Thompson, to be published by Edison Electric Institute, 1978.

"Noise Control and Hearing Conservation in Large Steam-Electric Generating Stations," G.F. Stone, T.W. Freman, and R.L. Craig. AIHAJ, Vol. 32, No. 2, February 1971, pp. 123-130.

"Noise Control in Power Plants," R.C. Rittenhouse. Power, July 1976.

"Noise Control of Gas Turbine Power Plants," R.B. Tatge. Sound and Vib., June 1973, pp. 23-27.

Power Plant Acoustics, L.N. Miller. Army Tech. Manual TM5-805-9, 1968.

Ships

"A Systems Approach to Shipboard Noise Control," G.E. Warnaka, H.T. Miller, and S.A. Farabaugh, Jr. Libr. of Vib. Shock and Noise Control, No. 55.

"Noise Control Program in Ship-Building Industry," R. Nilsson. Proc. Inter-Noise 78, Noise Control Institute, Poughkeepsie, NY, 1978.

Steel Industry

"Engineering Noise Control in the Steel Industry," W. Simpson and E.H. Toothman. Iron and Steel Engineer. June 1978, pp. 36-42.

Textile Industry

"Cutting Out Noise from the Whole Cloth," A.L. Cudworth. Noise Contr. Eng., Vol. 1, No. 1, Summer 1973.

"Gin Noise: How Much? Where? What to Do?," W.S. Anthony and O.L. McCaskill. Texas Cotton Ginners Journal and Yearbook, April 1977.

"Guidelines for Textile Industry Noise Controls," J.R. Bailey and C.M. Brown, ASME, 1973.

"Noise Abatement in Textile Industry," B. Wadmark, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Abatement in Textile Mills," P.H.R. Waldron. Mod. Textiles Mag., July 1969, pp. 49-50.

"Noise Control in the Textile Industry," A.L. Cudworth and J.E. Stahl. Proc. Inter-Noise '72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"Noise Reduction in the Textile Industry," H.P. Stout. Textile Inst. and Ind., May 1971, pp. 129-130.

"Some Aspects of Noise Control in the Textile Industry," P.D. Emerson. Amer. Assoc. of Textile Chems. and Colorists Symposium: "The Textile Ind. and the Environment - 1972," 22-24 May 1973, Washington, D.C.

"Textile Machinery Noise Control," Textile Ind., September 1977, pp. 167-170.

Other Industries

"Noise Abatement in the Stone Processing Industry," O. Backetman. Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Abatement in Sawmills," H. Elvhammar, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Abatement within the Pulp and Paper Industry," B. Wadmark, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Control in the Concrete Prefab Industry," L. Holmberg and O. Backetman, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Control in the Graphic Arts Industry," K. Lundin, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Control in the Mechanical Industry," P.-A. Berg, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Noise Control Design Guide for Moulding and Millwork Plants, B.A. Kugler, K. Niemiec, L.D. Pope, Western Wood Moulding and Millwork Producers, Portland, OR, 1973. Also, BBN Report No. 2436, Bolt Beranek and Newman Inc., Cambridge, MA 02138.

"Reducing the Noise Emission From a Forest Industry," L. Landstrom and H. Elvhammar, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Sawmill Noise Control Engineering Guide, B.A. Kugler, K. Niemiec, Southern Forest Products Assoc., Southern Hardwood Lumber Manuf. Assoc., Western Wood Products Assoc., 1976. Also, BBN Report No. 3285, Bolt Beranek and Newman Inc., Cambridge, MA 02138.

NOISE CONTROL: EQUIPMENT SPECIFIC

Air Moving Equipment

American Society of Heating, Air-Conditioning and Refrigerating Engineers Handbook. Ch. 33, "Sound and Vibration," 1970.

The definitive treatment of air conditioning noise.

"Applying Condenser Fans for Low Noise," W.J. Clauss. Building Sys. Design, Vol. 69, April 1972, pp. 24-27.

"Controlling Air System and Mechanical Equipment Noise," L.N. Miller. Heating, Piping, and Air Condition., February 1971, pp. 73-60.

"Controlling Noise in Compressed Gas Systems," E.R. Cunningham. Plant Eng., 15 April 1976.

"Control of Noise from Vents and Blowdowns," S.G. Paddock. Pollut. Eng., Vol. 8, No. 9, September 1976, pp. 50-52.

"Design of a Tuned Muffler for Large Induced-Draft Fans," I.L. Ver, W.E. Biker, D.K. Patel. Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Designers' Guide to Quieter Air-Moving Appliances," Appliance Manufactur., October 1972, pp. 111-112.

"Designing for Plenums in Air-Distribution Equipment," W.M. Harmon. Plant Eng., 21 July 1977, pp. 159-161.

"Fan Sound Control," Publication VS 306, April 1963, Woods of Colchester, Ltd., Braiswick Works, Colchester, Essex, England.

"Noise and Vibration Control of Large Ventilation Plant," D.A. Richardson. Noise Contr. and Insulation, March 1977, pp. 84-86.

"Noise Control in Air-Handling Systems," G. Sanders. Sound and Vib., Vol. 1, No. 2, February 1967.

Descriptive. Covers concepts of noise control in air conditioning, cooling towers, gas turbines, blowers, internal combustion engines, jet engines.

"Noise Control of High-Volume Gas Handling Plants," V.H. Hill. AIHAJ, Vol. 35, February 1974, pp. 107-111.

"Noise Reduction in Centrifugal Fans by Means of an Acoustically Lined Casing," M. Bartenwerfer et al. Noise Contr. Eng., Vol. 8, No. 3, 1977.

"Noise Reduction of Miniature Fans Using Blade Treatment," G.G. Tseo. Proc. Inter-Noise '72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"Reducing Noise from Air Ejectors," S.O. Emilson. Pollut. Eng., May 1978, pp. 75-76.

"Removing the Roar: In-Duct Noise Treatment," R.H. Dean, Heating Piping and Air Condition., February 1975.

"Selection of Minimum Noise Fans for Given Pumping Requirements," R.C. Mellin. Noise Contr. Eng., Vol. 4, No. 1, 1975.

"Silence Reduces Noise of Tip Driven Fan," R.F. Stengel. Design News, 18 February 1974.

"Silencing a Roots Blower," S. Berndtsson and L. Landstrom. Proc. Inter-Noise 77, Noise Control Foundation. Poughkeepsie, NY, 1977.

"Sound and the Centrifugal Fan." 1969.

This engineering guide provides alignment charts for estimating octave-band levels from centrifugal fans.

"Suppression of Ventilating Noise," M.J. Kodaras. Noise Contr., Vol. 2, No. 2, 1958.

Treatment of ducts, mechanical rooms.

"Think Quiet," G.M. Diehl. Compressed Air Mag. Reprint of set of articles, 1971.

This is a forerunner of the author's book on machinery noise. The emphasis is on air moving machinery.

Compressors

"Controlling Centrifugal Compressor Noise," T.J. Quinn. Plant Eng., 4 April 1974, pp. 111-113.

"How to Control Compressor Noise," G.M. Diehl. Hydrocarbon Process., July 1975, pp. 157-159.

"Noise Control: Diesel Compressors," F. Oran. Nat. Safety News, August 1975, pp. 67-71.

"Noise Control of Air Compressors," F.M. Oran. Env. Sci. and Technol., Vol. 9, No. 12, November 1975.

"Portable Air Compressor Noise Diagnosis and Control," W.N. Patterson. Proc. Inter-Noise 74, Noise Control Foundation, Poughkeepsie, NY, 1974.

"Preventing Vibration Problems in Reciprocating Compressor Foundation," W.H. Kauffman. Plant. Eng., 17 April 1978, pp. 99-101.

"Quieting Portable Air Compressors," W.N. Patterson. Noise Contr. Eng., Vol. 5, No. 1, 1975.

"Resonance in Centrifugal Compressor Piping," J.C. Seebold. Oil and Gas J., 4 December 1972.

"Stationary and Portable Air Compressors," G.M. Diehl. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

The chief noise sources are discussed thoroughly, and a few noise control suggestions are offered.

Cooling Towers

"Cooling Tower Acoustics: Sources and Solutions," B.E. Murray and E.W. Wood. Specifying Eng., November 1977, pp. 66-70.

"Cooling Tower Noise," I. Dyer and L.N. Miller. Noise Contr., May 1959.

Most of noise from fans. Estimation procedures given. No noise control suggestions.

"What to Do About Cooling-Tower Noise," H. Seelbach, Jr. and F.M. Oran. Sound, Vol. 2, No. 5, September/October 1963.

Describes characteristics of the noise, gives a detailed estimating procedure, and describes effect of intake and discharge silencers.

Drives and Transmissions

"Don't Overlook the Merits of Silent Chain Drives," P.G. Hermeling. Plant. Eng., 4 April 1974, pp. 108-110.

"Trouble Shooting Roller Chain Drives," R.W. Ebly. Constr. Maintenance and Equip., January 1975.

Electrical Equipment

"The Measurement and Suppression of Noise," A.J. King. London: Chapman and Hall, 1965.

This British book is devoted chiefly to noise from electrical machinery. Much attention is paid to the design of duct silencers.

Engines

"Compact Muffler Hushes IC Engine Noise," R.F. Stengel. Design News, Vol. 29, No. 11, 3 June 1974.

Noise Control for Reciprocating and Turbine Engines Driven by Natural Gas and Liquid Fuel, L.N. Miller. Amer. Gas Assoc., Cat. No. S20069, December 1969.

"Rooftop Concrete Block Houses for Muffling of Large Internal Combustion Engines," W.B. Dibold, D.K. Ross, and J. Killebrew. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Gears

"Gear Noise Source Identification and Reduction," R.F. MacWhorter. AIHAJ, September 1974, pp. 581-585.

"Gear Sound and Noise: Significance, Measurement, and Control, Part 1. Sound and Noise: Physiological and Psychological," E.J. Willauer. Form 710701, August 1971, The Falk Corp., Milwaukee, WI.

"Gear Sound and Noise: Significance, Measurement, and Control, Part 2. Gear Unit Sound Generation, Transmission, and Noise Control," E.J. Willauer and R.A. Schunck. Form 7204111, June 1972, The Falk Corp., Milwaukee, WI.

"Quiet! Nylon Gears at Work," K. Reisch. Plant Eng., 20 March 1975, pp. 127-130.

"Sources and Control of Gear Noise, Part 1: Conventional Design Approaches," C. George. Pollut. Eng., February 1975, pp. 40-43.

"Sources and Control of Gear Noise, Part 2: Contemporary Design Approaches," C. George. Pollut. Eng., March 1975, pp. 40-41.

Grinders

"Reducing Noise from Plastics Grinders," A.R. Morse. Pollut. Eng., July/August 1970.

Heaters, Furnaces, and Flares

"Combustion Noise in Industrial Burners," A.A. Putnam. Noise Contr. Eng., Vol. 7, No. 1, 8 July 1976.

"Heater Air and Noise Pollution," W.H. Marchant, Oil and Gas J., January 1973.

"Noise Control for Heaters and Furnaces," R.H. Bruggink and J.R. Shadley. Paper No. 46a presented at the 74th Nat. Meeting of the Amer. Inst. of Chem. Eng., 15 May 1973, New Orleans, LA.

"Noise Emission of Forced-Draft Refinery Furnaces," L.A. Bijl. Noise Contr. Eng., Vol. 5, No. 3, 12 November 1975.

"Pulsating Combustion in Elevated Floors Caused by Seal Drum Sloshing," J.G. Seebold. Noise Contr. Eng., Vol. 3, No. 1; 8 July 1974.

"Solving Flare-Noise Problems," J.F. Straitz, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Hydraulic Equipment

"Controlling Noise in Fluid Pumping Stations," J.R. Brennan. Plant Eng., 21 February 1974, pp. 89-93.

"Finding - and Fixing - Hydraulic Noise Sources," J.S. Stecki and P. Dransfield. Mach. Design.

"First Aid for Hydraulic System Noises," H.W. Wojda. Pollut. Eng., April 1975, pp. 38-40.

"Hydraulically Operated Machine Noise," R.J. Becker and S.J. Skaistis. Environ. Sci. and Technol.

"Muffling Hydraulic Systems," S.J. Skaistis and R.J. Becker. Mach. Design, 21 October 1976, pp. 124-128.

"Quieter Fluid Power Systems as Achieved with Empirical Techniques." Prod. Eng., September 1973.

"Reducing Fluid-Transfer Noise," G.F. Stiles. Mach. Design, 31 October 1974, pp. 62-67.

"Reducing the Operating Noise of Industrial Hydraulic Systems." Parker Hannifin Co., 1972.

Exhaustive and informative treatment, with excellent list of noise reduction techniques.

"Silencing the Noisy Hydraulic System," J.E. Miller. Mach. Design, 14 June 1973, pp. 138-143.

"Stopping Hydraulic System Noise," H.W. Wojda. Plant. Eng., 26 July 1973, pp. 74-75.

"Techniques for Reducing Noise in Industrial Hydraulic Systems," P.A. Kamis. Pollut. Eng., May 1975, pp. 46-49.

Mechanical Equipment

"A Noise Reduction Technique for Centrifugal Water Chiller," W.D. Wilken, R.C. Chanaud, and W. Soedel. Noise Contr. Eng., Vol. 3, No. 3.

"Chiller Noise: Its Impact on Building Design," W.E. Blazier, Jr. ASHRAE, May 1972, pp. 44-50.

"Controlling Mechanical Equipment Noise Vibration in Buildings," L.N. Miller. Architect. and Eng. News, Vol. 6, No. 3, pp. 50-54.

Noise Control for Mechanical Equipment, L.N. Miller. Dept. Army Tech. Manual TM5-805-4, 1970.

Metal Working Equipment

"Noise Control of Metal Stamping Operations," R.D. Bruce. Sound and Vib., Vol. 5, No. 11, November 1971.

Absorption, partial and total enclosures are discussed. Control at the source is also considered.

"Silent Stock Tube and Automatic Screw Machines," B.V. Schweitzer. Noise Contr., Vol. 2, No. 2, March 1956.

Describes development use of stock tubes with damping.

Pneumatic Tools

"A Practical Approach to the Exhaust Silencing of the Pneumatic Rock Drill," W.S. Gatley and M.G. Barth. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"Muffling Techniques for Reducing Pneumatic Tool Noise," R.A. Willoughby and E. Parker. Plant Eng., 6 September 1973.

"Noise Abatement of Pneumatic Rock Drill," BOM Rep. of Invest./ 1974, RI 7998.

"Pavement Breaker/Rock Drill Noise Control Methods," F.M. Kessler, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Progress in Suppressing the Noise of Pneumatic Rock Drill," J.W. Jensen and A. Visnapun. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Power Plant Equipment

"Control of Power Plant Fan-Generated Duct-Wall Radiated Noise with Acoustical Insulation," J.E. Shahan, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Low Frequency Noise Problems from Gas Turbine Power Stations," L.A. Challis and A.M. Challis, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Power Transformer Noise - Prediction and Control," C.G. Gordon, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Pulp and Paper Equipment

"Noise Reduction Techniques for Paper Converting Machinery." J. of the Tech. Assoc. of the P & P Ind., Vol. 56, No. 6, June 1973, pp. 65-68.

"Riveting Hammer and Paper Shredder," J.F. Engstrom. Noise Contr., Vol. 2, No. 2, March 1956.

Case histories on riveting hammer, paper shredder.

Pumps

"Avoid Noisy Pumps - Watch Installation Factors," H.O. Franz. Plant Eng., November 1967, pp. 170-172.

"Control of Vibration and Noise from Centrifugal Pumps," L.M. Evans. Noise Contr., Vol. 4, No. 1, January 1958.

Emphasizes selection and proper operating point.

"Source of Noise in Power Plant Centrifugal Pumps, with Considerations for Noise Reduction," N. Meyerson. Noise Contr. Eng., Vol. 2, No. 2, Spring 1974.

Punch Presses and Other Impact Equipment

"A Practical Approach to Punch Press Quieting," C.H. Allen and R.C. Ison. Noise Contr. Eng., Vol. 3, No. 1, 8 July 1974.

"A Review of Noise and Vibration Control for Impact Machines," R.D. Bruce. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"A Systems Approach for Control of Punch Press Noise," J.R. Bailey, J.A. Daggerhart, and N.D. Stewart. ASME 75-DET-49.

"Noise Reduction by Covers," J.R. Engstrom. Noise Contr., Vol. 1, No. 2, March 1955.

Case histories on multiside punch-press riveting machine.

"On Punch Press Diagnostics and Noise Control," O.A. Shinaishin. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Origins of Punch Press and Air Nozzle Noise," S. Sahlin and R. Langhe. Noise Contr. Eng., 12 November 1974.

"Punch Press Diagnostics and Noise Control," O.A. Shinaishin. Proc. Inter-Noise 72; Noise Control Foundation, Poughkeepsie, NY, 1972.

Suggests changes in die, stock, snubbers, perforated plates, enclosures.

Textile Industry Equipment

"Drawtwister Spindle Noise Reduction," R.W. Timbie and F.J. Howe. ASME, August 1973.

"Guidelines for Designing Quieter Equipment," C.H. Allen. ASME, 1969.

"How to Quiet the Noise Issue," Textile World, May 1972, pp. 39-44.

"Noise Abatement of Big Shuttle Looms," B. Wadmark, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Control for a Textile Machine," R.D. Bruce and N.F. Gubiose. Sound and Vib., May 1971, pp. 20-24.

"Ring Twister Noise Level Control," B.R. Farmer. Textile Ind., October 1972, pp. 117-119.

Turbines

"Beware Low Frequency Gas-Turbine Noise," R.N. Hoover. Power, May 1973.

"Noise Control of Gas Turbine Power Plants," R.B. Tatge. Sound and Vib., Vol. 7, No. 6, June 1973.

Defines NEMA noise limit curves, noise reduction for regenerator equipment, use of silencers.

Valves and Regulators

"Control Valve and Regulator Noise Generation, Propagation, and Reduction," G. Reethof. Noise Contr. Eng., Vol. 8, No. 2, 10 September 1977.

"Control Valve Noise and Its Reduction: State of the Art," G. Reethoff and A.V. Karvelis. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Control Valve Noise: Treat the Source or the Path," W.E. McGinnis. Oil and Gas J., 16 April 1973.

"Controlling On-Steam Valve Noise." Noise Contr. Eng., September 1972, pp. 42-44.

"Guide to Control Noise," J.A. Dollon. Instrum. and Contr. Syst., September 1974.

"Hydrodynamic Control of Valve Noise," A.C. Casciato. Pollut. Eng., Vol. 5, No. 9, September 1973.

"Hydrodynamic Control Valve Noise: Prediction/Treatment Techniques," A.C. Casciato. Heating, Piping, and Air Condition., April 1973, pp. 76-80.

Woodworking Equipment

"Analysis and Control of Wood Planer Noise," J.S. Stewart and F.D. Hart, Sound and Vib., March 1972, pp. 24-27.

"A Practical Approach to Chain Saw Noise Control," W. Soedel, B.R.C. Mutyala, and R. Cohen. Inter-Noise 77, Noise Control Foundation, Poughkeepsie, NY, 1977.

"Low Cost Acoustical Enclosure for Wood Planer," T.L. Walker and K.T. Feldman, Sound and Vib., November 1973, pp. 34-38.

"Quieting Circular Saws," A.L. Cudworth. Noise Contr., January/February 1960.

"Vibration Damper for Circular Saws," C.H. Allen. Paper W7 at ASA Meeting, 17 November 1976, San Diego, California.

Miscellaneous

"Control of Office Noise," H. Routson. Pollut. Eng., June 1973, pp. 36-37.

"Noise Control at Construction Sites," H.G. Poertner.

"Noise Control for Data Processing Systems," R.E. Wise. Noise Contr. Eng., Vol. 5, No. 2, 10 September 1975.

"Noise Generating and Prediction on Automated Bottling Lines," T.H. Melling and B.R. Wood. Noise Contr. Eng., Vol. 3, No. 2, 10 September 1974.

"Noise Problems by Turning in Lathes," P.-A. Berg and H. Elvahammar. Proc. Inter-Noise 77, Noise Control Foundation, Poughkeepsie, NY, 1977.

"Performance of an Acoustically Designed Herf Cropping Machine," S. Vajapyee and M.M. Sadek. Proc. Inter-Noise 77, Noise Control Foundation, Poughkeepsie, NY, 1977.

"Reduction of Noise from Construction Machine with Particular Reference to Cooling Systems," N.J. Stephenson and I.D.A. Thomas. Soc. of Auto. Eng., 10-13 September 1973.

"Results of Noise Control Efforts on Cigarette Filter Making Machines," C.E. Scott III and R.E. Dotz. Noise Contr. Eng., Vol. 3, No. 3, 12 November 1974.

"Steam Piping Noise," Environ. Design, Summer 1974, pp. 6-7.

NOISE CONTROL: CASE HISTORIES

"Field and Laboratory Examples of Industrial Noise Control,"
A.L. Cudworth, Noise Contr., Vol. 5, No. 1, January 1959.

Case histories on ejector chutes, tote boxes, chipping hammer,
air nozzles, and air compressors.

"Kentucky Bottler Solves Noise Problem with New Clear Acoustical
Covering," Mid-Continent Bottler, June/July 1977.

Describes results and barrier treatment for bottle filling lines
that had been causing an OSHA noise problem.

"Methods of Noise Control for Machinery Already Installed,"
L.F. Yerges. Proc. Inter-Noise 78, Noise Control Foundation,
Poughkeepsie, NY, 1978.

Excellent and compact summary of procedures, costs. Case his-
tories on grinders, automatic screw machines.

"Noise Reduction by Covers," J.R. Engstrom. Noise Cont., Vol. 1,
No. 2, March 1955.

Case histories on multislid punch press, riveting machine.

Noise - The Third Pollution, J.M. Handley. IAC Bull. 6.0011.0.
1973.

Case histories from industrial acoustics on cutoff saw, looms,
punch press, power transformer, process steamboiler.

"Riveting Hammer and Paper Shredder," J.R. Engstrom. Noise Contr.,
Vol. 2, No. 2, 18 March 1956.

Case histories on riveting hammer, paper shredder.

"The Application of Engineering Noise Control Measures," W.M.
Ihde. Nat. Safety News., Vol. 107, No. 6, June 1973.

This article provides an intensely practical summary of charac-
teristics of a wide variety of noise sources and of procedures for
noise control. There are many illustrations and examples.

NOISE CONTROL: NEW INSTALLATIONS

"Acoustical Considerations for the Selection of Fans for New Facilities," J.B. Graham. Proc. Inter-Noise 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

Gives data on effect of noise of fan type, variable inlet vanes, blade angle, and operating point on fan characteristics.

"Approach to Noise Control in New Facilities," R.D. Bruce and C.H. Allen. Proc. Inter-Noise 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

"Building a Quiet Plant from Initial Concept to Onstream Operation," S.L. Dryden and S.H. Judd. Pres. 37th Meeting Amer. Petrol. Inst. Div. of Refinery, 10 May 1972, New York, NY.

"Noise Control in New Facilities for Petroleum Production and Distribution," W.R. Thornton. Proc. Inter-Noise 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

"Organizing for Noise Control in a New Manufacturing Facility," A.H. Phelps. Proc. Inter-Noise 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

NOISE CONTROL: SPECIFICATIONS

"Noise Level Specifications for Machinery and Equipment,"
C. Ebbing and P.B. Ostergaard. Sound and Vib., Vol. 7, January
1973.

"Specifying Machinery Noise Levels," A. Thumann. Pollut. Eng.,
Vol. 6, No. 3, 1974.

NOISE CONTROL: MATERIALS

"Acoustical Materials for the Food Processing Industry," R.K. Miller. Proc. Inter-Noise 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

Gives noise levels, sanitary constraints on absorption materials, and isolator selection.

"Composite Materials for Noise Reduction," W.V. Cavanaugh. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Discussion of many materials, advantages and shortcomings.

"Elastomer Terminology," Lord Kinetmatics, Lord. Corp., 1635 W. 12th St., Erie, PA.

"Lead Proves a Heavy Favorite as Sound Control Material." Prod. Eng., November 1973.

"Materials for Noise Reduction in Food Processing Environments." Appl. Acoust., No. 11, 1978.

Compendium of Materials for Noise Control. HEW Publication No. (NIOSH) 75-165.

NOISE CONTROL TREATMENTS: BY TYPE

Barriers

"Barriers," J.N. MacDuff. Mech. Eng., August 1974, pp. 26-31.

"Modular Partitions and Barriers for Industrial Noise Control Applications," A. Eckel. Pollut. Eng., July 1977, pp. 41-43.

Noise Barriers: Design and Evaluation, T.J. Schultz. HUD Handbook. Also Report No. 2250, Bolt Beranek and Newman Inc., Cambridge, MA 02138, 1973.

"Predicting Acoustical Attenuation of Barriers," J. Polhemus. Pollut. Eng., September 1975, pp. 56-57.

"Roll-Away Acoustic Barriers for Isolating Machinery Noise," S.G. Paddock. Pollut. Eng., September 1974, pp. 49-50.

"Sound Attenuation by Barrier," V.L. Kurze and G.S. Anderson. Appl. Acoust., April 1971, pp. 33-35.

"The Performance of Acoustic Barriers," J.B. Moreland and R.S. Musa. Noise Contr. Eng., Vol. 1, No. 2, Autumn 1973.

Enclosures

"Acoustic Hood Design in Theory and Practice," M.J. Hine. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

"Attenuation of Nonmetallic Panels," K.S. Norby. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

For moderate amounts of transmission loss, lightweight panels can suffice. Paper describes characteristics of plastics, foams, aluminum, and safety glass.

"Designing Acoustical Enclosures," S.G. Tetorka. Pollut. Eng., October 1976, pp. 61-62.

"Facts about Noise Enclosures," T.F. Mimhold. Plant Eng., 16 September 1976, pp. 120-125.

"Effective Use of Acoustical Enclosures and Barriers," J.K. Floyd. Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

Mufflers

"An Evaluation of Mufflers to Reduce Punch Press Air Exhaust Noise," J.A. Onggerhart and E. Berger. Noise Contr. Eng., Vol. 4, No. 3, 6 May 1975.

"Design Criteria for Industrial Mufflers," F.P. Mechel. Proc. Inter-Noise 75, Noise Control Foundation, Poughkeepsie, NY, 1975.

"Design Optimization of Gas Turbine Silencers, I.L. Ver. Proc. Inter-Noise 75, Noise Control Foundation, Poughkeepsie, NY, 1975.

"Duct System Combines Flexibility with Sound Attenuation," R.A. Young. Pollut. Eng., May 1976.

"Evaluation of Pneumatic Silencers for Exhaust Valves and Parts Ejectors," H.W. Lord, H.A. Evenson, and R.J. Stein. Proc. Noise Expo '76, Noise Control Foundation, Poughkeepsie, NY, 1976.

"Exhaust Vent Silencer Design," C.L. Meador and J.J. Allan III. J. Eng. For Ind. Trans. of ASME, November 1972, pp. 1007-1019.

"High Thrust, Low Noise Level Nozzle," A. Frochoux. Proc. Noise Expo '75, Noise Control Foundation, Poughkeepsie, NY, 1975.

"Measured Absorption Characteristics of Resonant Absorbers Employing Perforated Panel Facings," E.E. Mikeska and R.N. Lane. J. Acoust. Soc. Amer., Vol. 28, September 1956.

Gives results for many different configurations, tuning from 100 to 800 Hz.

"Pneumatic Silencers for Exhaust Valves and Parts Ejectors," H.W. Lord, H.A. Evensen, and R.J. Stein. Sound and Vib., Vol. 11, No. 5.

"Quiet Bagging." Compressed Air Mag., July 1974, pp. 8-9.

"Selecting Silencers to Suppress Plant Noise," T.E. McLarty. Chem. Eng., 12 April 1976, pp. 104-105.

"Silencers: Their Design and Applications," G.J. Sanders. Sound and Vib., Vol. 2, No. 2, February 1968.

Describes types and attenuation frequency characteristics. Useful data on materials resistant to high temperatures, flow velocities.

Operator Booths

"Acoustic Shelters Meet Needs as Noise Pollution Grows," N.P. Chironis. Prod. Eng., 27 April 1970, pp. 160-161.

Processor Modifications

"Tension Control Bolt Eliminates Shop Noise." Met. Fabr. News, 4 March 1977.

Room Treatment

"Absorption as a Noise Control Measure in an Industrial Plant," C.L. Coyne. Noise Contr. Eng., March 1958, pp. 47-52.

"Controlling Industrial Noise by Means of Room Boundary Absorption," J.B. Moreland. Noise Contr. Eng., Vol. 7, No. 3 12 November 1976.

"Materials for Noise Absorption," E.G. Shippee. Pollut. Eng., January 1-73, pp. 37-38.

"Noise Management by Reverberation Control," P.R. Weihsmann. Pollut. Eng. Part 1: February 1978, pp. 56-57. Part 2: March 1978, pp. 55-59.

"The Acoustics of Externally Insulated Sheet Metal Roofs," R. Friberg. Swedish Research Summaries, Summary of Rep. R18, 1975.

"The Use of Acoustical Absorbents in Industrial Noise Control," L.F. Yerges, Sound and Vib., September 1972, pp. 31-32.

Lagging/Wrapping

"Noise Reduction Properties of Selected Pipe Covering Configurations," T.A. Dear. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Exhaustive study of many pipe lagging systems for reducing radiating noise, under controlled conditions. Excellent reference.

Vibration Isolation

"Practical Design of Machinery Foundations for Vibration and Noise Control," H.T. Miller et al. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Discusses real-life parameters that must be considered.

Damping

"Steel-Viscoelastic Composites," R.C. Miles, Sound and Vib., Vol. 7, No. 7, July 1973.

Describes a panel of two layers of steel bonded by a lossy adhesive. Excellent damping is obtained.

"Structural Damping as a Technique for Industrial Noise Control," G.E. Warnaka, et al. Reprint from J. Am. Indust. Hyg. Assoc., January 1972.

Comparison of noise radiated from damped and undamped machine surfaces.

NOISE PROBLEM MEASUREMENT, ANALYTICAL PROCEDURES, AND PROBLEM-SOLVING AIDS

- "Acoustic Impact Assessment Procedures Used in Industrial Plant Site Selection," F. McKessler. Noise Control Eng., Vol. 6, No. 1. 1976.
- "Analyzing the Sounds of Trouble," R.E. Herzog. Mach. Design, 6 September 1973, pp. 128-134.
- "A New Generation of Microprocessor Based Noise Analyzers," J.J. Earshen, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.
- "Application of B&K Equipment of Acoustic Noise Measurements," J.T. Broch. 2nd ed., October 1971.
- "Application of B&K Equipment to Mechanical Vibrations and Shock Measurements," J.T. Broch.
- "Assessing Noise Impact on the Environment," F.L. Cross, Jr., Pollut. Eng.
- "Audio Dosimeters: A Simple Way to Measure Noise Exposure," P.A. Sonntag. Plant Eng., 30 March 1978, pp. 265-267.
- "Audio Dosimeters: Shortcut to Measuring Noise Exposure," G.C. Groushore, Jr., Plant Eng., 30 September 1976, pp. 101-103.
- "A Wearable Noise Dosimeter," A.P. Singh. Noise Contr. and Vib. Reduction, 12 November 1973, pp. 250-254.
- "Calculating Combined Noise Levels," F. Caplan. Plant Eng., 10 June 1976.
- "Calculating OSHA Noise Compliance," T.A. Dean. Pollut. Eng., January 1973, pp. 43-44.
- "Characterization of Transformer Noise Emissions, Vol. 1, Technical Report and Volume 2, Substation Siting Guide," I.L. Ver, D.W. Anderson, and M.M. Myles. Empire State Electric Energy Research Corporation, July 1977.
- "Choosing Basic Instruments to Analyze Noise Problems," W.G. Hyzer. Res./Develop., October 1975, pp. 42-47.
- Community Noise Ratings, T.J. Schultz. Applied Science Publishers, Ltd., London (1972).
- "Controlling Industrial Noise, Part 1: Analysis and Measurement," C.H. Wick. Manufactur. Eng. and Manage., March 1973.

"Correlation of Machine Structure Surface Vibration and Radiated Noise," C.M.P. Chan and D. Anderson. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Mean square velocity of acceleration correlates well with sound power.

"Design and Evaluation of Dissipative Silencers," J.S. Wang, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Design Charts for Noise Reduction," J.T. Weissenburger. Pollut. Eng., July 1974, pp. 78-80.

"Diagnostic Tests for Locating Noise Source," T.H. Hodgson. Proc. Noise-Con 73, Noise Control Foundation, Poughkeepsie, NY, 1973.

Uses damped, absorbent-lined tube in front of sound level meter to reduce pickup of undesired sound for close-in measurements.

"Dosimeter Response to Impulsive Noise - Measurement Errors and Their Consequences," J. Svensson, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Estimating Noise from Control Valves," N.P. Cheremisinoff. Pollut. Eng., June 1977, pp. 48-50.

"Evaluation of Commercial Integrating-Type Noise Exposure Meters," W.A. Leasure, Jr., R.L. Fisher, and M.A. Cadoff. NBSIR 73-417, EPA 550/9-73-0007, December 1973.

"How to Estimate Fan Noise," J.B. Graham. Sound and Vib., May 1972, pp. 24-27.

"How to Estimate Sound Levels in Industrial Environments," R.A. DiRita and D.L. George, Sound and Vib., September 1972, pp. 33-35.

"How to Use Sound-Level Meters," W.G. Hyzer. Res./Develop., August 1975.

"Identification of Noise Sources," P.K. Baade. Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Valuable and practical information on techniques for locating noise sources.

"Industry Builds Arsenal to Combat Illegal Noise," B.D. Wakefield. Iron Age, 13 January 1975, pp. 31-38.

"Machine Noise Analysis and Reduction," T.D. Miller. Sound and Vib., Vol. 1, No. 2, March 1967.

Uses rotational periodicity to locate sources in bearings, electrical equipment, fans. Briefly considers control means.

"Masoneilan Noise Control Manual," Bulletin No. 340E, 3rd Ed., Masoneilan Int. Inc., Norwood, MA 02062.

"Measurement of Noise," R.D. Bruce. IEEE Transactions on Geoscience Electronics, Vol. GE-8, No. 3, July 1970.

"Measuring and Analyzing Noise," J.T. Weissenburger. Plant Eng., 1 November 1973, pp. 80-84.

"Method for Determining Complex Operator Noise Exposures," P.W. Hess and P. Jensen. Amer. Ind. Hygiene Conf., 22-27 May 1977, New Orleans, LA.

"Noise Exposure Sampling: Use with Caution," F.D. Mellott, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Noise Measurements," G. Rasmussen, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"On the Measurement of Source Strength of Large Industrial Sources," T. ten Wolde, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Origins of Noise," L.D. Mitchell and G.A. Lynch. Mach. Design, 1 May 1969.

"Personal Noise Dosimetry in Refinery and Chemical Plants," A.H. Diserens. J. of Occupational Med., April 1974, pp. 255-257.

"Pinpointing Noise with Sound-Level Meters," R.E. Herzog. Mach. Design, 5 April 1973, pp. 108-113.

"Pipewall Vibrations Reveal Valve-Generated Noise Levels," A.C. Fagerlund. Pollut. Eng., October 1977, pp. 56-58.

"Pneumatic Muffler Noise," A.L. Cudworth, W.J. Hanson, and W. Vuisting, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Portable Instrument for Locating Noise Sources in Mechanical Equipment," D.A. Gilbrech and R.C. Bender. J. Acous. Soc. Am., Vol. 30, No. 842, September 1958.

Two microphones correlated by a multiplier allow the direction of a sound source to be found.

"Power Station Design Due to Inconsistent Predictions of Fan Noise," F.A. Moritz, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Predict Approximate Sound Level for Axial Fans," W. Sisson. Pollut. Eng., March 1977, pp. 47-48.

"Predicting Noise Levels for New Equipment Installations," S.I. Roth. Plant Eng., 18 September 1975, pp. 147-148.

"Procedures for the Prediction of the Core Noise of Power Transformers," by C.G. Gordon, A.G. Piersol, and E.G. Wilby, Bonneville Power Administration, January 1978.

"Put Noise Criteria to Work for Your Plant," J.D. Constance. Power, April 1973.

"Some Considerations on the Measurement of the Sound Absorption Coefficient in Reverberation Rooms," H. Myncke and A. Cops, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Sound Power Measurements on Large Machinery Installed Indoors," G.M. Diehl, Proc. Noise Expo, September 1973.

"Technical Evaluation of Pneumatic Tool Noise," P.C.L. Lin, W.N. McKinnery, and M.K. Klein, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Techniques for Identifying Noise Control," J. Polthemus. Pollut. Eng., August 1976, pp. 36-77.

"Techniques for Industrial Noise Measurement: Choosing the Instrumentation," R.A. Boole. Plant Eng., 7 February 1974, pp. 105-107.

"The Uses of Sound Power Levels in Designing for Noise Control," P.K. Baade, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Sound Level Meter and Dosimeter Response to Unsteady Noise Levels," R.B. Wilkinson. Noise Contr. Eng., 4 March, 1975, pp. 68-75.

"Sound Power Determination of Machines In Situ," G. Huebner, Proc. Inter-Noise 72, Noise Control Foundation, Poughkeepsie, NY, 1972.

Discusses errors from being in near field, from finite number of measurements, from measurement error, and from room reflections. Latter are unimportant if area ratio (total absorption in room)/(area of measuring surfaces) is greater than 10.

"Sound Power Levels of Small Hand-Held Tools," G.M. Diehl. Compressed Air Mag., October 1977, pp. 16-19.

"Sound Power Measurements," T. Ketcham. B&K Technical Note, B&K Instruments, Inc., Cleveland, Ohio.

"Sound Power Measurements in Large Machinery Installations," G.M. Diehl. Sound and Vib., May 1974.

"Sound Power Measurements in Large Machinery Installed Indoors,"
Compressed Air Mag., January 1974.

NOISE CONTROL PROGRAM MANAGEMENT: ARTICLES OF GENERAL INTEREST
TO MANAGERS OF NOISE CONTROL PROJECTS

"An Example of Industrial Noise Reduction in Japan," M.A. Seaman, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Assigning Priorities to Noise Reduction Projects," A.L. Weiser. Pollut. Eng., October 1975, pp. 33-34.

"Basic Procedures for Evaluating Noise Control Project Costs," A. Thumann. Plant Eng., 11 November 1976, pp. 156-157.

"Boundary Absorption Versus Source Noise Control in Factories," S. Dahlstedt and S. Alm, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Contour Mapping Applied to OSHA Noise Problems," T.H. Rockwell. Noise Contr. Eng., Vol. 7, No. 1, 1976.

"Controlling Plant Noise Levels," R.E. Nisbet. Plant Eng., 24 June 1976, pp. 127-129.

"Coordinating and Managing Noise Problems in Textile Operations, Parts 1 and 2," I. Bull. Ctr. for Acoust. Stud., School of Energy, North Carolina State University.

"Cost-Effective Noise Control in Industry," R.S. Skinner. Noise Contr. Vib. and Isolation, January 1978, pp. 13-15.

"Engineering Solutions for Noise Control at GM," J.R. Hofmesiter. Sound and Vib., May 1975, pp. 39-43.

"Feasibility: the Uncertainty Factor in Noise Control," P.D. Emerson. Amer. Textile Rep./Bull., September 1974, pp. 60-62.

"Foundry Mounts a Successful Assault on Noise," T. Breen. Occup. Hazards, July 1976, pp. 31-33.

"Great Northern Launches an Attack on Noise in Its Main Paper Mills." Pulp and Paper, November 1977, pp. 156-158.

"GM's Noise Control Program," W.L. Van Tifflin. Sound and Vib. November 1973, pp. 29-31.

"How to Get Started on Noise Control," Textile World, June 1970, pp. 51-55.

"Noise - OSHA, and What Do We Do About It," B.R. Schroeder. The Manufacturing Confectioner, November 1974.

"Planning and Engineering for Noise Control - A Case History of a Major Refinery Project," J.G. Seebold. Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Planning and Organizing an Effective Noise Abatement Program," J.T. Weissenburger. Plant Eng., 20 February 1975, pp. 93-96.

"Practical Noise Control in a Large Manufacturing Plant," J.W. Storment and H.K. Pelton. Sound and Vib., May 1976.

"Standards and Criteria for Noise Control," K.M. Eldred, Proc. Inter-Noise 78, Noise Control Foundation, Poughkeepsie, NY, 1978.

"Study of Community Noise Complaints Caused by Electric Power Plant Operations," R.M. Hoover. Noise Contr. Eng., Vol. 6, No. 2, 1976.

"Techniques for Noise Exposure Control in Existing Power Plants," R.A. Popeck. ASME Paper No. 75-WA/PWR-6.

"The High Cost of Keeping Quiet," C.W.B. Compressed Air Mag., May 1977, pp. 8-11.

HEARING PROTECTORS: GENERAL

"About Those Hearing Protectors," T.F. Meinhold. Plant Eng., 4 September 1975, pp. 68-73.

"Controlling Industrial Noise, Part 5: Administrative Controls and Hearing Protection," C.H. Wick. Manufact. Eng. and Manage., July 1973, pp. 32-35.

"Control of Industrial Noise through Personal Protection," R. R.A. Coles. In: "Noise as a Public Health Hazard," W.D. Ward and J.E. Fricke, eds. Proc. Conf. Amer. Speech and Hearing Assoc., Rep. No. 4, Washington, D.C., June 1968.

"Ear Protectors - Their Characteristics and Uses," J.H. Botsford. Sound and Vib., November 1972, pp. 24-29.

"Methods of Noise Control - Personal Protection," P.S. Vanek-Lasen. Noise Contr., Vol. 1, No. 5, September 1955.

"Personal Hearing Protection Devices," P.L. Cheremisinoff. Pollut. Eng., December 1972, pp. 29-31.

"Pointers on Selecting Hearing Protectors," B.M. Routson. Pollut. Eng., December 1973, pp. 36-37.

HEARING PROTECTORS: EFFECTS OF USE

Performance

"dBA Attenuation of Ear Protectors," R. Waugh. J. Acoust. Soc. Amer., Vol. 53, No. 2 (1973) pp. 440-447.

"Ear Plug Performance in Industrial Field Conditions," M. Padilla. Sound and Vib., May 1976, pp. 33-36.

"Ear Protector Ratings," J.V. Tobias and F.M. Irons. FAA Civil Aero Medical Inst., December 1973, Oklahoma City, OK.

"Investigation of Sound Level Conversion as a Means of Rating Ear Protector Performance," R. Waugh. Amer. Ind. Hyg. Assoc. J., April 1976, pp. 23-24.

"Simplified Methods for Estimating Hearing Protector Performance," D.L. Johnson and C.W. Nixon. Sound and Vib., June 1974, pp. 20-27.

Speech Communication

"Speech Communications Effects and Temporary Threshold Shift Reduction Provided by $V_{51}R$ and Selectone-K Earplugs under Conditions of High Intensity Noise," R.R.A. Coles and C.G. Rice. J. Sound Vib., Vol. 4, No. 2, pp. 156-171.

"Value of Ear Defenders for Mental Work during Intermittent Noise," M.M. Woodhead. J. Acoust. Soc. Amer., Vol. 32, No. 6 (June 1960), pp. 682-684.

Bibliographies

"Bibliography on Ear Protection," Royal Aircraft Establishment, January 1973. Distributed by: NTIS, U.S. Dept. of Commerce.

"Environmental Pollution: Noise Pollution - Ear Protectors." Defense Doc. Ctr., Defense Supply Agency, Cameron Station, Alexandria, VA.

Hearing Conservation Programs

"A Guide to Industrial Hearing Conservation," W.F. Carver. Chicago: Beltone Electron. Corp., 4201 W. Victoria St., Chicago, IL.

"A Model Hearing Conservation Program," L.E. Miner and K.R. Peters. Job Safety and Health, February 1977, pp. 15-19.

"A Recommended Noise Compliance Plan for Evaluation by Industry in Developing an Effective Hearing Conservation Program," W.C. Creel and L.H. Royster. Ind. Ext. Serv. Newslett., School of Eng., North Carolina State University.

"Establishing an Effective Hearing Conservation Program," J.A. Zatek. Plant Eng., 30 October 1975, pp. 59-61.

"Hearing Conservation - A Call for Action," G.R. Bearce. Sound and Vib., January 1975, pp. 24-28.

"About Those Hearing Protectors," T.F. Meinhold. Plant Eng., 4 September 1975, pp. 68-73.

"Industrial Hearing Conservation," C.W. Nixon. Audiology and Hearing Educ., April/May 1976, pp. 33-41.

"Industrial Noise and Hearing Protection." Wassau: Safety and Health Services, Employers Insurance of Wausau, N.Y.

"Medical Prevention of Deafness from Noise (in a Swedish Machine Industry)," C.A. Heijbel. Reprinted from: Work-Environ.-Health, Vol. 7, No. 1, 1970, Inst. Occup. Health, Helsinki, Finland.

"Practical Experience of Hearing Conservation in Industry," C.A. Heijbel. Lecture held Indust. Noise Conf., London, December 1961, G. Mineralull, ed.

"Survey of Hearing Conservation Programs in Industry," M.E. Schmidek, M.A. Layne, B.L. Lempert, and R.M. Fleming. U.S. Dept. of HEW, Public Health Serv., Ctr. for Disease Contr. NIOSH, Div. of Lab. and Criteria Develop., June 1975, Cincinnati, OH.

"The Challenge of Hearing Protection," R. Mars. Ind. Med., Vol. 39, No. 3, March 1970.