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FOREWORD

This two-volume book comprises the papers read at the 10th International Conference on Noise Control Engineering 'INTER-NOISE 81', which was held in Amsterdam, 6-8 October 1981.

Noise is one of the most pervasive problems of our modern technological society. The need for noise abatement has become more and more urgent now complexity of technology grows.

Government agencies and other public authorities came into action and legislation and regulation concerning noise control have been or will be introduced in many countries.

By adopting this legislation the emphasis will shift towards the technical aspects of noise control in order to comply with these regulations.

For this reason the Netherlands Acoustical Society, the organizer of the Conference, chose as theme for INTER-NOISE 81 'The Practice of Noise Control Engineering'.

A glance over the table of contents will confirm that most papers deal with this theme.

A wealth of measurement data, calculation methods, case histories and experiences with noise control will be found in these two volumes. We may expect that these books will be a valuable reference for all those working in the field.

Following the example set in the Proceedings of INTER-NOISE 80 we have arranged the papers according to a classification of subjects that is almost identical to the INCE-classification, but some new items have been included and others have been adapted for international use.

On behalf of the Netherlands Acoustical Society we would like to thank all of the authors for their valuable contributions.

We are also grateful to Albertine Peutz for her assistance in preparing the final manuscript.

V. M. A. Peutz
A. de Bruijn
Editors

CLASSIFICATION OF SUBJECTS

00. GENERAL

01. Noise Control Engineering Societies
02. Other professional societies and professional activities
03. Publications (other than technical articles)
04. History and philosophy
05. Education
06. Noise Programs
07. Definitions and descriptors
08. Data banks
09. General N.C.E.

10. EMISSION: NOISE SOURCES

11. Noise-generating devices (including components & subassemblies)
12. Stationary noise sources (noise generation and control)
13. Moving noise sources (noise generation and control)
14. Specialized industrial machinery and equipment

20. PHYSICAL PHENOMENA

21. Physical mechanisms of noise generation
22. Natural sources of noise
23. Propagation, transmission and scattering
24. Sound propagation in the atmosphere

30. NOISE CONTROL ELEMENTS

31. Barriers and screens; shielding
32. Enclosures for noise sources
33. Seals for openings
34. Filters, mufflers, silencers and resonators
35. Absorptive materials
36. Ear protective devices
37. Noise attenuation in ducts
38. Special treatments

40. VIBRATION: GENERATION, TRANSMISSION, ISOLATION AND REDUCTION

41. Characteristics of vibration and shock
42. Noise generated by vibrating surfaces and structures
43. Propagation in structures (solid-borne noise)
44. Balancing of rotating and reciprocating machines
45. Reduction of impact forces; shock isolation
46. Vibration isolation and isolators

47. Vibration-damping materials and structures
48. Sonic fatigue
49. Design to withstand intense noise loads

50. IMMISSION: PHYSICAL ASPECTS OF ENVIRONMENTAL NOISE (Multiple Sources and Multiple Paths)

51. Building noise control
52. Community noise control
53. In-plant noise control
54. Noise surveys
55. Shipboard noise control
56. Aircraft interior noise control
57. Vehicle interior noise control

60. IMMISSION: EFFECTS OF NOISE

61. Perception of sound
62. Physiological effects
63. Psychological effects
64. Effects of noise (other than on man)
65. Effects of vibration and mechanical shock
66. Sociological effects; Community reaction to noise
67. Economic effects
68. Environmental impact statements
69. Criteria and rating of noise

70. ANALYSIS

71. Instrumentation systems
72. Measurement techniques
73. Test facilities (design and qualification)
74. Signal processing
75. Analytical methods
76. Modeling and simulation
77. Sampling and quality control procedures
78. Audiometry
79. Psychoacoustical evaluations and testing

80. REQUIREMENTS

81. Standards
82. National legislation and regulations
83. State, local, regional legislation and regulations
84. International legislation and regulations
85. Ordinances, including zoning requirements
86. Building codes
87. Specifications
88. Auditing and enforcement
89. Labeling

TABLE OF CONTENTS

	Page
FOREWORD.....	V
 OPENING AND DISTINGUISHED LECTURES.....	 1
 TOWARDS A QUIETER SOCIETY	 3
L. Ginjaar, Minister of Public Health and Environmental Protection, Leidschendam, The Netherlands	
 THE ALL-IMPORTANT PRACTICE OF NOISE CONTROL ENGINEERING	 7
V.M.A. Peutz, General Chairman, INTER-NOISE 81, The Hague, The Netherlands	
 THE INTERNATIONAL INSTITUTE OF NOISE CONTROL ENGINEERING - STATE OF THE INSTITUTE	 15
Fritz Ingerslev, President of the Institute, The Acoustics Laboratory, Lyngby, Denmark	
 THE PRACTICE OF NOISE CONTROL ENGINEERING IN THE U.S.A.	 21
William W. Lang, INCE, Poughkeepsie, New York, USA	
 GENERAL.....	 37
 A REVIEW OF EPA'S IMPLEMENTATION OF THE QUIET COMMUNITIES ACT OF 1978	 39
C. Caccavari and C.J. Shura, U.S. Environmental Protection Agency, Washington, D.C., USA and S.E. Dunn, Florida Atlantic University, Boca Raton, Florida, USA	
 THE NOISE ABATEMENT PROGRAM OF THE GERMAN FEDERAL MINISTRY OF THE INTERIOR, AND ITS IMPLEMENTATION	 43
T.G. Scholz, Bundesministerium des Innern, Bonn, Federal Republic of Germany	

THE "LOW-NOISE VEHICLE PROGRAM" OF THE UMWELTBUNDESAMT (FEDERAL ENVIRONMENTAL AGENCY)	47
Gert Kemper, Umweltbundesamt, Berlin, Federal Republic of Germany	
PARTICIPATION OF PUBLIC AND PRIVATE ORGANISATIONS IN DEVELOPMENT OF NOISE ABATEMENT ACTION PROGRAM OF THE GERMAN FEDERAL GOVERNMENT	51
Ansgar O. Vogel, Bundesministerium des Innern, Bonn, Federal Republic of Germany	
NOISE DATA BANKS - A SCANDINAVIAN APPROACH	55
Svein A. Storeheier and Kaare H. Liasj�, Acoustics Laboratory/ELAB, Trondheim, Norway	
ACOUSTICAL ENGINEERING	59
Jean P. Mattei, Electricit� de France, Clamart, France	
EMISSION: NOISE SOURCES	63
NOISE PROBLEMS WITH RESPECT TO UNDERWATER COOLING PUMPS: A CASE HISTORY	65
H. Straatsma and J.A. Spaninks, Peutz & Associ�s, The Hague, The Netherlands	
SOUND EMISSION OF SHREDDER PLANTS	69
H. Straatsma and R.P.M. Jansen, Peutz & Associ�s, The Hague, The Netherlands	
DRIVE LINE VIBRATION AS A CAUSE OF NOISE INSIDE A CAR	73
Andrzej Rejski, Warsaw Technical University, Warszawa, Poland	
ACOUSTICAL INVESTIGATIONS OF THE NOISE EFFECT OF SOME CONSTRUCTION DATA OF THE PROFILED PORT DURING AIRFLOW ONTO A LIMITED AREA WITH REDUCED PRESSURE	77
Tadeusz Zieliński, Łódź, Poland	
THE A-WEIGHTED SOUND POWER LEVEL OF FANS	81
A. von Meier, M + P akoestische adviseurs B.V., Amstelveen, The Netherlands	

Volume 1

Page

NOISE REDUCTION OF AIR VENTILATORS AT MIDDLE PRESSURE BOILERROOM 6,4 MPa IN HEAT STATION BRNO-SPITALKA	85
Vladimír Kamberský, Energoprojekt Praha, Praha, Czechoslovakia	
NOISE GENERATED BY CENTRIFUGAL FANS	89
Jan Sentek, University of Mining and Metallurgy, Cracow, Poland	
DIFFERENCES BETWEEN DIESEL ENGINE NOISE SOURCE STRENGTHS MEASURED IN THE SHIP AND ON THE TEST BED ..	93
R.B. Conn, British Ship Research Association, Wallsend, Tyne and Wear, United Kingdom	
ANALYSIS OF CAVITY RESONANCE IN A 5 HP HERMETIC RECIPROCATING COMPRESSOR WITH ELLIPTICAL SHELL	97
T. Hayashi, T. Matsuzaka and H. Shinto, Toshiba Research and Development Center, Kawasaki, Japan	
DROP HAMMER NOISE: THE EFFECTS OF STRESS CONCENTRATIONS IN THE IMPACT AREA	101
M.E. Westcott, Institute of Sound and Vibration Research, Southampton, United Kingdom	
TRANSFORMER NOISE	105
Willem M. Schuller, Akoestisch Adviesbureau Peutz & Associés B.V., Nijmegen, The Netherlands	
NOISE FROM DISTRIBUTION TRANSFORMERS	109
G. Belisario and S. Franco, University of Rome, Rome, Italy	
HOW TO WORK FOR SILENT HOUSEHOLD APPLIANCES	115
Ch. Betzhold and H. Gahlau, Dr. A. Stankiewicz GmbH, Celle, Federal Republic of Germany	
NOISE CONTROL IN HOUSEHOLD APPLIANCES	119
J. Crucq, Philips Research Laboratories, Eindhoven, The Netherlands	
NOISE MEASUREMENT OF SMALL CENTRAL HEATING - CIRCULATING WATER PUMPS WITH WATER-BORNE SOUND TRANSDUCERS	123
G. Bernard, CETIM, Senlis, France	

Volume 1

Page

NOISE FROM NEW TYPES OF ENERGY CONSERVATION EQUIPMENT IN DETACHED HOUSES	127
Arne Jagenäs and Mendel Kleiner, Chalmers University of Technology, Gothenburg, Sweden	
NOISE MECHANISMS IN WATER TAPS	131
Helmut V. Fuchs and Ulrike Klöppner, Fraunhofer-Institut für Bauphysik, Stuttgart, Federal Republic of Germany	
NOISE REDUCTION IN CUTTING AND WELDING	135
U. Ackermann, DFVLR, Institut für Experimentelle Strömungsmechanik, Berlin, Federal Republic of Germany and E. Ratsch, Scheisstechnische Lehr- und Versuchsanstalt Berlin, Federal Republic of Germany	
PROBLEM OF VIBRATION MODAL DENSITY IN NOISE REDUCTION OF A METAL CUTTING CIRCULAR SAWS	139
Szymon Kulczycki, Silesian Technical University, Dabrowa Górnicza, Poland	
JET ENGINE NOISE AND ALLEVIATION	143
René Jacques, Ecole Royale Militaire, Brussels, Belgium	
NOISE REDUCTION CONCEPT FOR UNI-CAR RESEARCH PASSENGER CAR	147
Werner Liedl and Rolf Schwarz, Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren Stuttgart, Stuttgart, Federal Republic of Germany	
NOISE DIRECTIVITY OF A LIGHT RUNNING VEHICLE	151
Georges Pachiaudi, Institut de Recherche des Transports (IRT-CERNE), Bron-Cedex, France	
NOISE REDUCTION BY A NEW POWER-TRAIN CONCEPT OF A MOTORCYCLE	155
Karl Heinz Menzl, Zündapp-Werke GmbH, München, Federal Republic of Germany	
CONTROLLING THE NOISE OF A CONVENTIONAL HEAVY-DUTY DIESEL TRUCK	159
Erich K. Bender, Robert L. Bronsdon and Paul J. Remington; Bolt Beranek and Newman Inc., Cambridge, Massachusetts, USA	

Volume 1

	Page
ON LOCATING SOURCES OF RADIATED NOISE GENERATED BY HIGH-SPEED ELECTRIC TRAINS	165
W.F. King III, B. Barsikow and E. Pfizenmaier, DFVLR, Berlin, Federal Republic of Germany	
HYDROACOUSTIC NOISE FROM SEISMIC VESSELS	169
N.P. Tyvand, Det Norske Veritas, Høvik, Norway	
LAWN MOWER NOISE TESTING ON NATURAL AND ARTIFICIAL SURFACES	173
Hans Goydke, Physikalisch Technische Bundesanstalt, Braunschweig, Federal Republic of Germany	
NOISE ANALYSIS AND REDUCTION OF TWISTING TEXTILE MACHINE	177
Giorgio Bartolozzi, University of Bologna, Bologna, Italy and Michelangiolo Bartolozzi, Consulting Engineer, Bologna, Italy	
NOISE REDUCTION BY ENCLOSURE OF WOOD WORKING MACHINES IN SAW MILLS AND JOINER MILLS	183
Urban Emborg, AB Hedemora Verkstäder, Hedemora, Sweden	
THE WAYS OF NOISE REDUCTION AT THE SOURCE IN THE CASE OF AN ELECTRIC ARC FURNACE	189
M. Makomaski and A. Zmyslowski, Silesian Technical University, Dabrowa Górnicza, Poland	
BALL MILL NOISE	193
Willem M. Schuller and Fokke D. van der Ploeg, Akoestisch Adviesbureau Peutz & Associés B.V., Nijmegen, The Netherlands	
PHYSICAL PHENOMENA	197
INFLUENCE OF A SHIP PROPELLER LOADING ON THE SHAPE OF THE UNDERWATER SOUND'S POWER SPECTRUM	199
Eugeniusz Kozaczka, Wyzsza Szkola Marynarki Wojennej, Gdynia, Poland	

Volume 1

	Page
SCALING OF NOISE FROM SMALL CONVENTIONAL, ANNULAR AND COAXIAL JETS	203
Mahmoud S. Audi, University of Riyadh, Riyadh, Saudi Arabia	
APPROXIMATE EFFECTIVE POINT MOBILITIES FOR FOUNDATIONS AND MACHINERY FOOTINGS	209
Björn Petersson and Juha Plunt, Chalmers University of Technology, Gothenburg, Sweden	
GENERATION AND REDUCTION OF RADIATED STRUCTURE BORNE NOISE CAUSED BY MACHINERY ELEMENTS DIFFERENT IN SHAPE	213
Gerhard Hübner, Berlin, Federal Republic of Germany	
EVALUATION OF MACHINERY NOISE BY INTENSITY MEASUREMENTS	217
L. Janssen and L. Van den Noortgate, CRIF, Heverlee, Belgium and P. Sas, K.U. Leuven, Heverlee, Belgium	
SOUND DECAYS IN RECTANGULAR ROOMS	221
J.S. Bradley, National Research Council of Canada, Ottawa, Canada	
SOUND PROPAGATION IN FREE FIELD AND IN THE PRESENCE OF GROUND	225
H.W. Jones and D.A. Hutchins, Dalhousie University, Halifax, Nova Scotia, Canada	
SOUND PROPAGATION OVER AN IMPEDANCE DISCONTINUITY ...	229
Karsten Bo' Rasmussen, The Acoustics Laboratory, Lyngby, Denmark	
A CLOSE LOOK AT THE TRANSFER FUNCTION IN OUTDOOR NOISE PROBLEMS	233
A.J. Berkhout and D.W. van Wulfften Palthe, Technical University of Delft, Delft, The Netherlands	
THE PREDICTION OF SOUND LEVELS FROM EXPLOSIVE SOURCES	239
P. Lord and D.J. Saunders, University of Salford, Salford, United Kingdom and A.G. Sills, Meteorological Office, Larkhill, United Kingdom	

DIFFRACTION BY BARRIERS OVER ABSORBENT GROUND	243
Sabiñ I. Hayek and Matthew A. Nobile, The Pennsylvania State University, University Park, Pennsylvania, USA	
COMPARISON OF NOISE ATTENUATION IN VEGETATIONS WITH STATIONARY AND MOVING SOUND SOURCES	249
M.J.M. Martens, P. Hulshof, L. Huys, J.G.B. Konings, J. Olders and M. Walraven, Catholic University, Nijmegen, The Netherlands	
ACOUSTIC EFFECT OF TREES ON BARRIERS	253
Willem M. Schuller en Jakob H. de Zeeuw, Akoestisch Adviesbureau Peutz & Associés B.V., Nijmegen, The Netherlands	
NOISE PROPAGATION AND ATMOSPHERIC CONDITIONS	257
Jean Hache, Société Bertin, Plaisir, France	
A NEW METHOD FOR CALCULATION OF THE INFLUENCE OF WIND AND TEMPERATURE II	261
B.A. de Jong, D.W. van Wulfften Palthe and A.J. Berkhout, University of Technology, Delft, The Netherlands	
IMPEDANCE MEASUREMENTS OF NATURAL SOILS WITH AN INCLINED TRACK METHOD	265
L.A.M. van der Heijden, K.U. Nijmegen, Nijmegen, The Netherlands	
CALCULATION OF NOISE PROPAGATION WITH MULTIPLE GROUND REFLECTIONS IN AN INHOMOGENEOUS ATMOSPHERE ...	271
Tapio Lahti and Heikki Tuominen, Technical Research Centre of Finland, Espoo, Finland	
PROBLEMS IN DETERMINING THE OUTDOOR GROUND IMPEDANCE BY MEASUREMENTS OF SOUND PROPAGATION	275
V. Mellert, J. Wempen and W. Wilken, Universität Oldenburg, Oldenburg, Federal Republic of Germany	

NOISE CONTROL ELEMENTS	279
HIGHWAY NOISE CONTROL BY BARRIERS: A STATE-OF-THE-ART SUMMARY IN THE UNITED STATES	281
Louis F. Cohn, Vanderbilt University, Nashville, Tennessee, USA	
SHIELDING OF NOISE BY EARTH BERMS	285
U.J. Kurze, Müller-BBM GmbH, Planegg/München, Federal Republic of Germany	
BARRIER INSERTION LOSS FOR LARGE NOISE SOURCES, WITH SPECIAL EMPHASIS ON POWER TRANSFORMER NOISE CONTROL	289
István L. Vér, Grant S. Anderson and Colin G. Gordon, Bolt Beranek and Newman Inc., Cambridge, Massachusetts, USA	
A PRACTICAL PREDICTION MODEL FOR SHIELDING OF TRAFFIC NOISE BY ROADSIDE BUILDINGS	293
Kálmán Wittner, Déldunántul Planning Company, Pécs, Hungary	
DISSIPATIVE SILENCERS WITH MINIMIZED BACK PRESSURE ..	297
F.B. Shenoda, National Institute of Standards, Cairo, Dokki, Egypt and H.M.M. van der Wal and A. von Meier, M + P akoestische adviseurs B.V., Amstelveen, The Netherlands	
ACTIVE ACOUSTIC ATTENUATION OF ELECTRIC TRANSFORMER NOISE	303
O.L. Angevine, Angevine Acoustical Consultants, Inc., West Falls, New York, USA	
IMPROVEMENTS IN ADAPTIVE ACTIVE ATTENUATORS	307
Glenn E. Warnaka, Lord Corporation, Erie, Pennsylvania, USA and Jiri Tichy and Lynn A. Poole, The Pennsylvania State University, State College, Pennsylvania, USA	

VIBRATION: GENERATION, TRANSMISSION, ISOLATION AND REDUCTION	311
DRIVE-ROD FOR VELOCITY ERROR CORRECTION	313
G.T. Endrőczy, Central Research Institute for Physics, Budapest, Hungary	
IMPULSIVE NOISE SOURCE ON THE STRUCTURE BY MECHANICAL INERTANCE	317
Jae-eung Oh, S. Mori and M. Matsui, Tokyo Institute of Technology, Yokohama, Japan	
INVESTIGATIONS ON THE RADIATION OF LOW FREQUENCY SOUND FROM HIGHWAY BRIDGE	321
K. Kaneyasu and Y. Adachi, Public Works Research Institute, Tsukuba Science City, Ibaraki, Japan and M. Koyasu and S. Shimizu, Kobayasi Institute of Physical Research, Kokubunji, Tokyo, Japan	
LOW FREQUENCY NOISE FROM A BIG BUILDING DUE TO OSCILLATORY FORCES OF A MACHINE	325
Niichi Nishiwaki, Noboru Fujio and Takuji Mori, Noguchi Institute, Tokyo, Japan	
VIBRATION INSIDE TALL BUILDINGS	331
N.W.M. Ko, University of Hong Kong, Hong Kong	
VIBRATION CHARACTERISTICS OF PIPE CLAMPS	335
Maurice F. White, Acoustics Laboratory/ELAB, Trondheim, Norway	
ON THE ASSESSMENT OF VIBRATIONAL DAMPING APPLIED IN THE VICINITY OF MARINE-ENGINE FOUNDATIONS	341
M. Ohlrich, Ødegaard & Danneskiold-Samsøe, Copenhagen, Denmark	
A LIGHTWEIGHT MOUNT FOR EFFECTIVE ISOLATION OF PETROL ENGINE VIBRATIONS AT ACOUSTIC FREQUENCIES IN SMALL MOTOR BOATS	345
Klaus Albrecht, Fraunhofer-Institut für Hydroakustik, Ottobrunn bei München, Federal Republic of Germany	

Volume 1

	Page
A DAMPED GRILLAGE FRAME AS A LIGHT MACHINE FOUNDATION	349
Esse Kamph, IFM-Akustikbyraan AB, Gothenburg, Sweden and Roger Lundén, Chalmers University of Technology, Gothenburg, Sweden	
AN ENGINEERING METHOD FOR ESTIMATING VIBRATION ISOLATION PROPERTIES ALSO AT HIGHER FREQUENCIES	353
Juha Plunt, IFM-Akustikbyraan AB, Gothenburg, Sweden	
SIMPLE EXPERIMENTAL METHOD FOR ESTIMATING FREQUENCY BANDWITH AVERAGES OF REAL PARTS OF POINT ADMITTANCES FOR SIX DEGREES OF FREEDOM	357
J.W. Verheij, TPD Institute of Applied Physics TNO, Delft, The Netherlands	
PARTIAL DAMPING LAYER TREATMENTS FOR PLATES	363
K.K. Stevens, C.H. Kung and S.E. Dunn, Florida Atlantic University, Boca Raton, Florida, USA	
IMMISSION: PHYSICAL ASPECTS OF ENVIRONMENTAL NOISE 367	
NOISE CONTROL ENGINEERING IN BUILDINGS IN GENERAL ...	369
P.A. de Lange, University of Technology, Eindhoven, The Netherlands	
SOUND PROPAGATION IN INDUSTRIAL HALLS - APPLICATION OF FFT-ANALYSIS IN MEASUREMENTS	373
Anders Aagren, The University of Luleaa, Luleaa, Sweden	
PUBLIC TELEPHONE CABINETS: ACOUSTIC PROPERTIES	377
K.R. Cook, Royal Melbourne Institute of Technology, Melbourne, Victoria, Australia	
IMPULSIVE NOISE IN ENCLOSURES	383
Zdenek Kyncl, Electrotechnical Faculty CVUT, Prague, Czechoslovakia	