

THE INTERNATIONAL CONFERENCE NOISE CONTROL 82

The International Conference NOISE CONTROL 82 took place in Krakow on 20-22 September, 1982. It was organised by the Committee on Acoustics of the Polish Academy of Sciences, the Polish Acoustical Society and the Institute of Mechanics and Vibroacoustics of the Academy of Mining and Metallurgy, in cooperation with the Central Institute of Occupational Safety, the Institute of Building Technology and the Institute of Fundamental Technological Research.

NOISE CONTROL 82 was the sixth scientific conference devoted to noise and abatement in our country. The preceding conferences were organised in 1964, 1970, 1973, 1976 and 1979, mainly headed by Prof. Stefan CZARNECKI, the vice-chairman of the Organizational Committee of the present conference. The conference was attended by 152 participants, 28 of whom were representatives of Bulgaria, Czechoslovakia, Denmark, Holland, the GDR and Hungary. The sessions of the conference were divided into four problem groups: A. Methods of reducing noise and vibration of industrial machines and appliances, B. Noise in buildings, C. Communication noises, D. Physical foundations of the emission and propagation of sound and methods of analysis and measurement. During the conference 64 lectures were delivered, out of which 8 were plenary lectures, 35 were delivered in the problem groups and 23 in poster sessions. The following lectures were delivered during the plenary meetings:

- Z. ENGEL, *Noise and vibration control in Poland.*
 - Z. ENGEL, *Professor Stefan Czarnecki — an eminent Polish vibroacoustician.*
 - P. BRÜEL, *Sound intensity measurement.*
 - P. BRÜEL, *Room acoustic speech transmission index.*
 - O. J. PEDERSEN, *Measurement and description of environmental noise.*
 - W. PEUTZ, *Accuracy in noise control measurements and calculations.*
 - F. DUL, R. GUTOWSKI, R. MAROŃSKI, J. PIETRUCHA, *Relationships between transient aerodynamics and classical acoustics in the aspect of noise radiation by vibrating bodies.*
 - J. KIREJCZYK, *Method for diminishing cavitation noise.*
- The following lectures were delivered in the group devoted to the problems of abating noise and vibration of industrial machines and appliances:
- D. AUGUSTYŃSKA, *Methods for diminishing infrasound noise.*
 - S. BEDNARZ, J. PIOTROWSKI, *Application of shot-oil eliminators in vibrations.*
 - J. BREWIŃSKI, A. WIDOTA, *Possibilities of diminishing machining tool sound levels.*
 - Z. ENGEL, H. PANUSZKA, M. MENŻYŃSKI, *Investigations of the acoustic field of reduction systems of gas stations.*
 - Z. GŁOWACKI, *On a certain method for optimizing vibroinsulation systems.*
 - A. GOŁAŚ, *Analysis of the possibilities of minimizing the vibration of a roller table strip.*
 - A. GOŁAŚ, J. KOWAL, *Synthesis of an optimal controlled insulator.*

- J. KOWALAK, C. CEMPEL, *Influence of machine condition on noise level.*
- J. KOWAL, M. SZEPSKI, *Dynamic synthesis of a passive system of controlled vibroinsulation.*
- S. KULCZYCKI, *On constructional problems of metal-cutting circular saws in the noise criterion aspect.*
- B. NIEWCZAS, W. STOJANOWSKI, A. TROSZOK, *Aerodynamic noise of an air hammer.*
- K. PRYNC-SKOTNICZY, *Method for calculating the acoustic frequency response of a centrifugal fan.*
- J. SAJDAK, *Acoustic investigation of a screen with a polyurethane sieve.*
- M. STANKOV, *Sumovye kharakteristiki i metody znizheniya suma i energeticheskoy promyslenosti.*
- K. TOMASZEWSKI, J. FELIS, *Criteria and indexes for vibroacoustic evaluation of machines and appliances.*
- D. WASZKIEWICZ, *Methods for diminishing the vibroacoustic activity of machines.*
- J. ZYDROŃ, *Some possibilities of diminishing noise in Diesel engines.*
- In the group concerned with noise in buildings, the following lectures were delivered:
- K. CIESIELSKA, *Criteria of evaluation and requirements concerning the acoustic insulation of apartment doors.*
- A. IŻEWSKA, *Subjective method for evaluating the acoustics of apartment buildings in terms of installation noises.*
- Z. MIETLIŃSKI, *Economic aspects of shaping the acoustic conditions.*
- W. ODZYWOŁEK, *Acoustic problems related to the MWW mechanical ventilation system.*
- C. PUZYNA, *Methods for evaluating the acoustic quantities of large-volume halls.*
- O. SIMKOVA, *Dynamical properties of shell-like enclosures.*
- M. STAWICKA-WALKOWSKA, *Analysis of the acoustic properties of "mini" housing estate interiors in the aspect of development in urban planning.*
- B. SZUDROWICZ, *Acoustic insulating power of massive double partitions.*
- D. TRYNKOWSKA, *Designing ear muffs on the basis of empirical dependencies.*
- E. ZALEWSKA-PACIOREK, *Digital simulation of selected parameters of the acoustic field.*
- The following lectures were devoted to communication noises:
- J. ADAMCZYK, Z. STRZYŻAKOWSKI, Z. STOJEK, *Investigations of the vibroacoustic effects in Warsaw underground crosstown railway line.*
- S. CZARNECKI, W. NOWAKOWSKI, *Investigations of the conditions of vibroacoustic energy propagation on Poniatowski Bridge in Warsaw in real and model conditions.*
- R. DANECKI, *Evaluation of the results of street-noise research in Częstochowa.*
- J. EJSMONT, S. TARYMA, *Tire/road, noise road and laboratory measurements relationship.*
- R. KUCHARSKI, *Relationship between L_{eg} multi-hour values and short-period values of road noise levels.*
- J. MIAZGA, K. JANICKA, *Noise of road vehicles used in Poland in the light of certification investigations.*
- M. WOJCIECHOWSKA, M. KRASZEWSKI, *Initial attempts to evaluate tramway transport in relation to noise emission.*
- The following lectures were devoted to the problems of physical foundations of the emission and propagation of sound and methods of analysis and measurement:
- J. ADAMCZYK, M. ŁABNO, *Envelope analysis of vibroacoustic signals.*
- K. ARCZEWSKI, R. GUTOWSKI, K. KULIMICZ, J. PIETRUCHA, *Application of sensitivity analysis for modifying the acoustic field of vibrating plate elements.*
- J. BEDŃARSKI, *Uses of resonance density functions in investigations of the vibrations of continuous systems.*
- W. CHOLEWA, *PAS4/CAMAC — a programmed analyser of signals.*
- W. DĄBROWSKI, W. MARCINKOWSKI, M. OGORZALEK, *Sensitivity analysis of mechanical systems by the coupled-system method.*

- A. GOŁAŚ, W. WSZOLEK, *Investigations of the relationship between the mean velocity of a vibrating surface and the level of emitted noise.*
- A. IZWORSKI, R. TADEUSIEWICZ, *Computer method of extracting noise signal formants.*
- J. KAŹMIERCZAK, *Use of an acoustic signal in determining the wear of electric-arc furnace roofs.*
- A. KOŁODZIEJSKI, E. KOZACZKA, *Investigations of the vibration and acoustic pressure of a mechanical vibrator.*
- E. KOZACZKA, *Homomorphous processing of acoustic signals propagated in a bounded medium.*
- T. KWIEK-WALASIAK, *Acoustic power determination by the intensity method.*
- G. MELTZER, *New results on the dynamical behaviour of the human body in sitting position.*
- R. PANUSZKA, T. UHL, *Analysis of accuracy pressure near-field method for noise source identification.*
- W. RDZANEK, *Acoustic resistance of a circular plate for hyper-resonance frequencies.*
- J. ROSIŃSKI, T. UHL, *Selected problems of shock noise.*
- J. STENIČKA, *Determination of structure-borne noise transmission for machines in dwelling building constructions.*
- S. SZYSZKO, *Methods of constructing spectra patterns of the operational state in the diagnostics of a gear pump.*
- R. TADEUSIEWICZ, *Computer methods for noise signal analysis.*
- T. UHL, H. ŁOPACZ, *Identification of the dynamic properties of mechanical systems by the pulse method in terms of diminishing their vibroactivity.*
- R. ZAKRZEWSKI, *Post for manual testing of manual tools.*

In evaluating the conference, one can say that, in spite of the state of war, NOISE CONTROL 82 allowed to sustain the scientific activity in the domain of environmental noise control. Nevertheless, the present year did not bring forth the annual open seminar on acoustics. The conference demonstrated a great vigour on the part of the acoustic community in further integration of such organisations as the Committee on Acoustics, the Polish Acoustical Society, research institutes, design offices and production plants. The numerous sessions and broad discussions allowed for a significant exchange of information and enlarged the knowledge of phenomena related to noise and vibration and countermeasures. It can be readily ascertained that there was a healthy interplay between the results of fundamental and theoretic research and the results of applied work. The discussions that took place after and between lectures showed the necessity for continuing fundamental research, for it provides the basis for applied research and, finally, practical employment. The need for interdisciplinary research in environmental noise control was much stressed. An exposition of Brüel - Kjaer equipment was organised during the conference. From a chronicler's viewpoint one should note two facts. Firstly, Prof. Ignacy MAŁECKI, an eminent Polish acoustician and director of the Institute of Technological Research of the Polish Academy of Sciences, received the title of doctor honoris causa of the Academy of Mining and Metallurgy during the latter's Senate meeting, which took place on 23 September, 1982; secondly, the conference was preceded by the opening of a modern vibroacoustic complex with a large number of laboratories, workshops and lecture rooms.

Zbigniew Engel
(Kraków)