

#### 4-TH INTERNATIONAL CONFERENCE ON "ENVIRONMENTAL PROTECTION IN MECHANICAL ENGINEERING"

Győr, Hungary, April 11-13, 1978

The 4-th Conference, held April 11-13, 1978, at Győr (HPR), was dedicated to the problems connected with a broadly conceived environmental protection against harmful effects and consequences of production processes and technical, technological and communication equipment encountered chiefly in the mechanical engineering. The Conference was sponsored by the local section in Győr of the Hungarian Scientific Society of Mechanical Engineers in cooperation with the local section of the Hungarian Optical, Acoustical and Film Technical Society (OPAKFI), as also with the Board for the Matters of Natural Environment at Győr. Chairman of the Organizational Committee was Mr. J. Jambor, Secretary General Mr. E. Varga. The deliberations took place in the Cultural Centre Raba at Győr, Szécheny Square 7.

Main themes involved three groups of problems:

- I. Noise and vibration protection.
- II. Water pollution protection.
- III. Air pollution protection.

According to this program the deliberations took place simultaneously and independently in three sections designated with numbers I, II and III, respectively. The main aid of the Conference was:

- the discussion of actual and steadily growing threat to natural environment in three above mentioned fields caused by the intensive development and thus of the ever wider range of harmful effects of the mechanical engineering, communication and other related branches of engineering;
- a search for new methods, means and systems of the elimination or reduction of these effects or the protection of man against these effects.

The conference was attended by some 300 participants, including several scores of specialists from the following countries: England, Belgium, Czechoslovakia, Denmark, France, Yugoslavia, the German Democratic Republic, Poland and the Federal Republic of Germany. The Polish delegation consisting of seven persons representing the Polish Academy of Sciences, technical universities and institutes sponsored by respective ministries attended only the deliberations of the Section I, "Noise and vibration protection", delivering four lectures out of five included in the preliminary program. The number of lectures to be delivered in individual sections was the following: Section I - 29 lectures, Section II - 15 lectures, Section III - 10 lectures. The conference was begun by a plenary session at which Dr Tibor Bakács, Chairman of the Economic Committee and Labour Rights

Protection of the Hungarian Academy of Sciences delivered a lecture on the crucial subject: "Main problems of the environmental protection".

With view to the absence of Poland's representatives in the deliberations of the Sections II and III and the subject of interest of readers of "Archives of Acoustics", this report will only concern the deliberations of the Section I.

The Section held three sessions and ended its deliberation with a round-table conference summing up its proceedings. Lectures delivered:

1. G. ÚJSÁGHY (Hungarian People's Republic), *Possibilities and limitations of the use of magnetic recording for making measurements in the field of noise and vibration protection.*
2. J. KACPROWSKI, J. MOTYLEWSKI (Polish People's Republic), *Measurement of noise and acoustic diagnostics of machines.*
3. J. BRAASCH (Denmark), *New devices for measuring of noise.*
4. D. ZORIČ (Yugoslavia), *Aircraft noise: interdisciplinary aspects and ethic problems.*
5. J. MIAZGA (Polish People's Republic), *Noise of automotive vehicles as a threat to man's natural environment.*
6. L. CZABALAY (Hungarian People's Republic), *An analysis of methods for the evaluation of communication noise.*
7. F. AUGUSZTINOVICZ, B. BUNA (Hungarian People's Republic), *The method of control measurements of noise inside and outside of automotive vehicles.*
8. G. POTA (Hungarian People's Republic), *The efficiency of noise control inside and outside of buildings.*
9. L. SÁRVÁRI, T. MARJAT, E. KUNOS, J. KOVÁSC (Hungarian People's Republic), *The results of measurements of noise in new residential districts at Győr.*
10. V. MIKLÓS (Hungarian People's Republic) *The effect of the design and exploitation conditions of power substations on the level of produced noise.*
11. B. JOST (France), *The evaluation of noise level in industrial buildings.*
12. T. SZENTMÁRTONY (Hungarian People's Republic), *Damping of flow noise.*
13. H. BAUER (Federal Republic of Germany), *The noise produced by conventional power stations and the present state of its damping.*
14. J. GIERGIEL (Polish People's Republic), *Construction means and possibilities of reducing the noise of rotating machines.*
15. D. STURM (Federal Republic of Germany), *The damping of noise by the use of shields on an example of three big-power blowers.*
16. V. NÖSSELT (Belgium), *The problem of the ratio of formant frequencies to fundamental frequency of noise in the light of measuring techniques.*
17. J. KAZIMIERCZAK (Polish People's Republic), *Noise of machines as a subject of investigations and results of work of their designer.*
18. K. TÖPFER (German Democratic Republic), *The evaluation of new efficient calculation methods of noise insulation in rail vehicles.*
19. P. TOKARZ (Polish People's Republic), *The effect of a working point on the noise characteristic of radial fans (the lecture was not delivered).*
20. L. TIMÁR-PEREGRIN (Hungarian People's Republic), *Noise and vibrations of rotating electric machines and their identification by measurements.*
21. V. STUCHLIK (Czechoslovakia), *Measurement and evaluation of noise for the purpose of health protection.*
22. W. POLLANDT, H. WALTER (German Democratic Republic), *Measurement of noise of mechanical vehicles in industrial plants and investigations on reducing the main noise sources.*
23. S. SPELLENBERG (Hungarian People's Republic), *Experiments on the complex individual noise protectors in case of a light or medium hearing impairment.*
24. H. G. DIEROFF (German Democratic Republic), *Mechanism of hearing impairment caused by stationary and impulse noise on a work stand.*

25. E. HOCHENBURGER, T. KATONA, D. MARTIKÁNY, O. RIBÁRIO, G. VÁRÓ (Hungarian People's Republic), *Importance of Earprotectometer in preventing the hearing impairment because of noise.*

26. G. VÁRÓ (Hungarian People's Republic), *Antivibrating rubber backings for machines in textile industry.*

27. J. KARUCZ (Hungarian People's Republic), *Previous and present results of measurements of noise damping in Metallurgical Plant at Őzd.*

28. M. GABNAI, E. BAROSS (Hungarian People's Republic), *Investigations of noise protection of workers in industrial plants exposed to the action of noise.*

29. L. TRAEAGEMAN (German Democratic Republic), *Noise control in traffic* (film show).

It follows from this enumeration that 9 lectures, that is, about 32% of the total in Section I (Nos. 1, 2, 3, 6, 7, 11, 16, 20, 21) concerned new methods, systems and devices for the measurement and analysis of noise and vibrations; 7 lectures, that is, about 24% (Nos. 8, 12, 15, 18, 26, 27, 29) dealt with various systems and equipment for silencing the industrial noise sources; 5 lectures, that is, about 16% (Nos. 4, 5, 9, 13, 22) concerned the intensivity and harmfulness of industrial and traffic noise of different physical structures encountered in factories, residential buildings and districts; 4 lectures, that is, about 14% (Nos. 10, 14, 17, 19) stressed the role and importance of silent-running machines and equipment from the viewpoint of their designing; 4 lectures, that is, about 14% (Nos. 23, 24, 25, 28) were dedicated to the methods of preventing the hearing impairment caused by industrial noise by the use of individual protectors.

The scientific level of the lectures was not especially high since they were chiefly addressed to the industrial workers as future recipients and users of the methods, systems and equipment for the measurement of noise and vibrations and noise and vibrations control.

Nevertheless a number of conceptional, technical and constructional solutions in the field of the instrumentation for the purposes of the metrology of noise and vibrations and for the design of silent-running machines and equipment deserve attention because of their originality.

An important role played the round-table discussion which in a way has extended and supplemented the discussion following individual lectures and at the same time enabled mutual exchange of experience and information between representatives of various fields of science, technics and engineering who represented various European countries. This has permitted to estimate objectively the present state in this field of acoustics and point out new trends of development and formulate guidelines in realizing an efficient policy in the range of noise control.

The organization of the Conference deserves a high praise both as regards the provision of technical facilities for a simultaneous and efficient translation from Hungarian into two languages English and German and conversely and the value of informative material published in one volume containing the full texts of lectures delivered at three section in English and German. One copy of this publication is available in the Acoustic Library of the Institute of Fundamental Technological Research (Warszawa).

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