



## **ON ICET CONTRIBUTORS FROM THE FORMER CZECHOSLOVAKIA**

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**Editorial note:** *The text below was sent to the Test Co-ordinator by Dr Alois Koutny in November 2000. It was the Author's original intention to present it to the Seminar Participants and the Test Co-ordinator has decided to publish it in the form prepared for an oral presentation. The fate of cavitation research labs in the former Czechoslovakia was typical for numerous research centres in the former Eastern Block countries after the transformation at the turn of eighties and nineties. The readers in possession of the ICET Preliminary Report document are asked to introduce by themselves corrections indicated by the Author.*

Mr. Chairman, Ladies and Gentlemen!

My name is Alois Koutný and I am coming from Olomouc in the Czech Republic. Let me inform you briefly about the situation in the companies that took a part in the former Czechoslovak program ICET, the situation after ten years have passed.

The cavitation erosion tests of selected material samples were carried out at the Technical University of Ostrava - the contributor was Professor Noskievič, who was also at the same time the test panel member, and SIGMA Research Institute in Olomouc - where I was the contributor.

At the Department of Hydromechanics and Hydraulic Devices of the Technical University of Ostrava, headed during the years 1964 and 1991 by Professor Noskievič, a Cavitation Laboratory equipped by ultrasonic vibratory instrument was established. The research in cavitation erosion was done there till the middle of the 90's, when Professor Noskievič retired; he died in October 1996.

Following the recent information provided by the present head of this department, the research in cavitation erosion is not expected to be continued, the experimental equipment in the laboratory is obsolete, and no longer in operation.

As regards the company where I was employed - the Laboratory of Wear Research in the SIGMA Research Institute in Olomouc - it does not exist any more, either. The SIGMA concern (pumps and valves) disintegrated in April 1990. I want to specify the information at the bottom of page 13, published in the Preliminary Report, part I - SIGMA was not dissolved by the Czechoslovak government but on the basis of an agreement among the delegates of the concern companies. The research institute too, was step by step divided, transformed, and practically dismantled. All the test devices used for the cavitation erosion testing, which had been designed and developed by me in SIGMA for several years, were in 1991 moved as a gift to the ČKD Blansko company. These devices were stored there for several years with the test-room stock, with out being mounted and used. About two years ago they were scrapped.

Please insert in the text the following correction: In Table 10 on page 16, the correct value of the mean pressure is 70 kPa.

In the former Czechoslovakia three very different stages are found that can be distinguished from the point of view of cavitation erosion research in the past three decades.

During the years 1970-80, a great deal of research capacity and financial resources was devoted to the cavitation erosion research at several universities and research institute departments. There were held national seminars "Research of cavitation". From 1974 to 1983 the research was co-ordinated by a team of the Czechoslovak Academy of Sciences, later, until 1990 the research continued within the Czechoslovak Society for Science and Technology - group "Cavitation Wear". After 1980 we could see a considerable attenuation of the research activity and this research field became only a marginal matter in the SIGMA Research Institute.

After the fall of the Communist regime in November 1989, when an economical transformation of the national economy started, the state financial resources for science and research became considerably limited. Actually all the Czech research centres found themselves without funding and practically the entire research of the cavitation and cavitation erosion was ceased by 1990. Most research workers left their companies and now there are engaged in other activities, which is also my case.

The last, rather extensive research project was the experiment called "Study of regularities and mechanism of combined cavitation-abrasive wear in water with hard particles and material selection optimization". It happened to be a part of my PhD thesis, finished in 1987.

What is the future of the cavitation erosion research in the Czech Republic after the year 2000?

To say something optimistic - I have saved in my garage one ultrasonic vibratory instrument complying with the ASTM standards. Recently I was asked to lend it to the University of Pardubice for material testing and now I hesitate to engage myself again in the research in the field of cavitation erosion, which for 40 years was not only my hobby, but probably my personal drug.

Thank you for your attention.

*Alois Koutný*