Events

NETZSCH-GEFTA award for Dr. Karl-Richard Löblich of Lehrte/FRG presented in Osnabrück/FRG on October 3, 1989

The nomination committee of the Thermal Analysis Society (e.V.) GEFTA, has selected Dr. Karl-Richard Löblich for the NETZSCH-GEFTA award.

Dr. Löblich was born on March 1, 1929 in Hannover, Germany. After passing his college-entrance examinations in 1950 he worked as an industrial employee at the potash works in Ronnenberg to finance his planned chemistry studies. Interrupted often by the need to work to pay for his studies, Dr Löblich earned his degree in 1960 at the Technical College in Hannover.

The experimental work for the PhD dissertation that followed afterwards was carried out by Dr. Löblich at the Institute for Technical Chemistry of the College in Hannover as part of the team of Dr. Fritz Fetting, who was an assistant professor at that time and who is now a professor in Darmstadt. The dissertation dealt with the mechanism of flame stabilization in fast streaming fuel-gas-compositions by bluff bodies.

After his promotion in 1961, Dr. Löblich worked for more than three years as an assistant on the Fetting team. In 1962 he had the opportunity for an extended study and lecture-tour to the United States.

In 1965 Dr. Löblich started working for the firm of Woellner in Ludwigs - hafen, where he concerned himself with the improvement of auxiliaries for foundries and later also with the optimization of washing agents and cleansing materials.

After a short, but very interesting activity at the Battelle-Institute in Frankfurt from October 1968 to April 1969, Dr. Löblich went back to the potash industry, guided by his interests in the field of mining and geology. Nowadays, Dr. Löblich is leading the laboratory of the "Bergmannssegen-Hugo" works and is, additionally, responsible for different tasks in production. A large amount of his time in the potash field was absorbed with work at the Kaliforschungs-Institut, the research institute of the potash company Kali und Salz AG, Hannover, where Dr. Löblich was in charge of the section "Magnesium Compounds" and "Technology of Pelletization". Here, he was occupied with process development and, whenever it was possible with purely scientific investigations. Also connected to this field are the theoretical and experimental works in Thermal Analysis. In these works, on the basis of published research results, there is found a connection between the time dependent flux from a heat source and the signal curve which is generated by a DTA instrument. This connection, which is described by a nth order linear differential equation with n time constants, could be proved exactly. Then, the structure of the coefficients of the differential quotients of this equation, which are made up of n time constants in increasing order of the n differential quotients, could be shown. Because of the fact that the coefficient of the first differntial quotient is the sum of all these time constants and the sum has a finite value which is not considerably greater than that of the greatest constant within the series of n constants, the value of the time constants with an index higher than that of the greatest constant must very much decrease with the increasing index. Otherwise the progression of the n constants would be divergent. This feature is even more valid for the coefficient of the second differential quotient and also for those of higher orders. The coefficient of the second order differential quotient, for example, is the sum of

n^{-1} binary products made up of the n constants according to the model: $k_1 k_2 + (k_1 + k_2) k_3 + \ldots + (k_1 + k_2 + \ldots + k_{n-1}) k_n$. Therefore, it is possible in practice to work only with two time constants in order to get reasonable results. In doing so, the order of the differential equation is reduced to the second one. For the special case of impulse, the differential equation of second order has an exact solution, which allows the determination of the two time constants. Dr. Löblich has extended the theory to heat shocks of longer time duration and herewith he has shown the way to the practical specification of both constants. Also, he has concerned himself with the dependence of these time constants on the temperature.

The perfomance of Dr. Löblich in the fields of flame-stabilization, fluidized bed technique, evaporation technique, the production of fertilizers and thermal analysis is found deposited in 13 scientific publications and 31 domestic patents.

Dr. Löblich has been married since 1952 to his wife Bettina and has two daughters, who are also married. As there is not much spare time left at the moment, he is already looking forward to his retirement, which will take place in 21/2 years, when he will have more time for his family. Also his hobbies will be taken better care of: history, making walking tours, collection of minerals and fossils. Dr. Löblich intends to attend more strongly to the work of scientific associations and the Union of Friends of Mineralogy and Geology (VFMG) in the future; in earlier times, Dr. Löblich has led the Hannover-section of VFMG as president. The VFMG set as their goal to enthuse as many people as possible in geological cohesion and diversity of minerals and to stimulate sensible collection. The enjoyment of mother nature should be guided by a careful approach to her.

The NETZSCH-GEFTA award, as given by NETZSCH-Gerätebau GmbH, Selb/Bavaria is presented every year to a person, to show appreciation for extraordinary, scientific performance in the field of Thermal Analysis.

We grant Dr. Karl-Richard Löblich the NETZSCH-GEFTA award 1989 for his outstanding theoretical and experimental works in the field of Thermal Analysis.
The NETZSCH-GEFTA award is accompanied by a payment of DM 3.000,-.
We congratulate Dr. Karl-Richard Löblich.