

IN MEMORIAM

Professor
Stanislaw Knothe

02.02.1919 - 31.12.2015

Foreign Member
of the
Polish Academy of Sciences



Professor Stanislaw Knothe died on 31st December 2015 in Cracow, Poland, after a long successful and active career, which included various aspects of academic and practical leadership in the field of mine safety. This brought him an outstanding recognition in the Polish mining industry, as well as abroad.

The fact that he was born near a coal mine owned by his uncle, probably resulted in Professor Knothe becoming an undergraduate of the Wawelberg & Rotwand College of Engineering in Warsaw in 1937. In 1939 his education was interrupted by the outbreak of World War II. He was called into the army and served in the artillery. In 1945 he resumed his education at the Faculty of Mining Engineering of the Academy of Mining & Metallurgy in Cracow. He graduated in 1947 and worked a couple of month in an oil mine. Subsequently, he was invited by Prof. Witold Budryk, a recognised worldwide authority in mining engineering, to join the Chair of Mining and Coal Preparation of the Academy of Mining as an assistant. Soon the talented graduate became a Ph.D student under the supervision of Professor W. Budryk, his master and mentor. In 1951 he successfully completed the Ph.D thesis: *The Influence of Mining on the Surface in View of Safety of Objects Located on It*, which became the foundation of a very fine and clear theory of the ground movement caused by ongoing mining operations. This approach is based on a concept of an influence curve, and selection of an appropriate Gaussian function. The validity of this concept

was successfully tested in many ways: theoretically, on models and observations in mines carried by Professors: W. Budryk, J. Litwiniszyn, A. Salustowicz, and others: his colleagues, students and mining engineers. The theory has been used very successfully for prediction of subsidence problems in Poland and worldwide, inspired many who worked on subsidence problems caused by mining activity. It is still used by those who are adopting this theory in order to deal with complex cases despite availability of more powerful numerical methods. Application of the theory in the Polish coal mines contributed to a significant rise of the coal production in the post-war period.

Professor S. Knothe was also an expert in mine ventilation, with due attention given to methods of solving problems of the air flow in large networks with analog computers.

In recognition of his research and academic achievements the Academy of Mining awarded Professor S. Knothe with the degree of D.Sc. (1954), appointed him Associate Professor (1958) and Professor (1975). He took up twice the position of the Dean of the Faculty of Mining Engineering in 1958-1960 and 1981-1984 and was for many years in charge of the Chair of Mine Ventilation.

In 1954 Professor S. Knothe was invited by Prof. W. Budryk to undertake research in the newly established Strata Mechanics Research Institute of the Polish Academy of Sciences in Cracow. There he headed the Department of Strata Mechanics, Laboratory of Displacement and acted as deputy director of the Institute until his retirement. His contribution to the development, reputation and international recognition of the Strata Mechanics Research Institute was significant. His personal involvement in lobbying for the construction of the new building of the Strata Mechanics Research Institute (1968) was decisive.

Achievements and recognition have brought to Professor S. Knothe honours as well as duties. He was elected a corresponding member (1976) and full member (1989) of the Polish Academy of Sciences (1997), was awarded the title Doctor Honoris Causa by the Academy of Mining and Metallurgy in Cracow (1994). He acted as a member (1960-2015), chairman (1981-1995), honorary chairman (2003-2015) of the Committee Mining of Polish Academy of Sciences, editor in chief the Archives of Mining Sciences (1968-2003). He was invited to join scientific councils of institutes and engaged in vast consultancy work for the state mining authorities and mining companies. He took part in numerous congresses, symposia at home and abroad. Professor S. Knothe was honored with the highest state awards and recognition of the mining community.

Professor S. Knothe passed away peacefully on 31st December 2015 and was buried in Cracow on 13th January 2016 with honors, in the presence of the family and representatives of the academic as well as mining communities.

Friends, colleagues and his students will remember him as a man of principles and kindness.

Waclaw Trutwin