

SOLUTION MINING RESEARCH INSTITUTE

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MEETING
PAPER



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Results of Ultrasonic Cavity Monitoring

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Introduction

The first trials with ultrasonic probes in Polish salt mines were conducted by CHEMKOP in 1969. Various prototypes of ultrasonic equipment were tested over five years of experiments. The result of that work was the original version of the ultrasonic probe still in use at CHEMKOP today. This probe, or echosounder, is designed for measuring excavations accessible through boreholes.

CHEMKOP, the Research and Development Centre for Mining of Chemical Raw Materials in Cracow, is not only the designer and manufacturer of the Polish echosounder, but its main user as well.

The present echosounder is the result of twenty years of development. It has been field-tested extensively during CHEMKOP's service logging contracts, which means several thousand measurements in a few hundred cavities. They were conducted not only in Poland but also in Czechoslovakia, Romania, former Yugoslavia and East Germany, as well as in Brazil.

Measuring the shape and size of solution-mined cavities constitutes the basic application of the echosounder. However, based on growing practical experience with the new generation of ultrasonic equipment and progress in interpretation methods. We are able to provide many more data on solution-mined cavities.