

Abstract:

Analysis of the state of knowledge in the field of impact of goafs caulking on the value of the exploitation factor indicates that there are no a comprehensive studies supported by measurement data.

In this work, was performed analyze of geological and mining data for coal mine "Ruda", where the mining exploitation is carried out od goafs caulking with dusts from power plants, and at the same time on the surface are carried out subsidence measurements and horizontal deformations.

On the base of the subsidence measurements and analysis of the volume of dust supplied in goafs, their impact on the value of the exploitation factor was estimated, using the formulas of Knothe-Budryk theory. At the same time, the parameters of the theory were determined. The calculations were made in three different ways.

It was shown that in the case of longwalls without goafs caulking with dust, the exploitation factor amounts around 0.88, and for longwalls, where 30% of height constitutes dust, the exploitation factor amounts around 0.69.