

Evaluation of the work with the rock mass with different properties of selected designs of anchor bolts, on the basis of the results of laboratory and underground tests

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The presentation demonstrates a summary of laboratory and underground testing of anchor lining for 6 types of expanded anchor bolts. The anchor bolts were installed in 7 underground testing grounds featuring different geological-mining conditions in the ZG Lubin mining enterprise that are characterized by various geological and mining conditions.

The underground testing was performed three times: immediately upon the installation of the anchor bolts, one year and two years from their installation in the rock mass. The laboratory testing of load capacity was performed in two series in the cores, which were collected at the underground testing grounds. It was mentioned that the load capacity testing is a part of a larger project, within which the strength tests of the cores collected from the rock mass and of the material of the anchor bolts were performed. The whole presentation was completed with a numerical analysis of cooperation of the bolts with the rock mass.

Preliminary conclusions were presented, which will serve perfecting of the methods of selection of the anchor lining for the prevailing roof conditions.