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Underground workings as a most suitable place for the development of mining technologies - a case study from Polish copper mines

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The current EU policy emphasizes the necessity of the development of more safe and efficient mineral raw exploitation methods. The higher extraction rate and lowest possible environmental footprint of mining activities are the main goals of many international projects. Still, as recent experiences have shown it is challenging to develop new technologies in standard laboratory conditions. This is due to the inability to reproduce the environments present in most of the underground sites. Therefore post-mining underground workings seem to be the most suitable places for the development, validation and testing of new, more efficient mining technologies.

Such activities are continuously performed in KGHM Polish Copper mines, which are the test sites for numerous national and international research projects aimed at improving machinery, monitoring systems, mining methods and safety of work in underground conditions.

In the present research, the recent experiences of KGHM CUPRUM company in terms of the development of new mining technologies fitted to Polish underground copper mines have been presented.