

Advanced methane drainage strategy employing underground directional drilling technology for major risk prevention and greenhouse gases emission mitigation

PROJECT DETAILS

Funding Programme: Research Fund for Coal and Steel (RFCS)
Sub-Programme: Coal
Funding Scheme: Pilot and demonstration project

Project Reference (Grant Agreement Number): 847338
Project Duration: 54 months
(from 2019-07-01 to 31-12-2023)

Total Project Budget: € 2.880.149,05
Total EU Grant-Aid: € 1.440.074,54
UniOvi Budget: € 232.200,00

Website: <https://dd-met.inig.pl/>

PROJECT DESCRIPTION

The primary objective of the proposed project is to demonstrate application of long reach underground directional boreholes drilled above mined coal seams as a novel methane drainage technology in longwall mining of coal. The project aims at demonstration of alternative methane drainage technology (not used in Europe) which will contribute to increased mine safety and productivity, reduction of methane emissions and hazards mitigation costs. The project will be conducted in Poland and in Russia. The implementation of proposed technology will be supported by research (laboratory experiments, numerical modelling and extensive field testing) to assure adjustment to field conditions and technology optimisation. The aim of performing two field pilots in different geological and mining conditions of largest Polish and Russian hard coal basins will provide the opportunity to compare the results of individual tasks and will make this technology even more credible and universal. Project will develop a cost effective and environmentally friendly technology to perform methane drainage during coal seam exploitation using in-mine directional drilling replacing very expensive methane drainage galleries developed above mining coal panels, as well as other auxiliary methane drainage methods. The project assumptions will be confirmed in the field and, as a result, best practices will be derived, which will cover technical, technological, environmental and economic aspects, which should be considered in decision making for implementation of proposed drainage technology.

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