

HEET II

Within the HEET II project, energy transmission will be based on either single-wire or wireless technology, which will allow for the continuous recharging of the batteries of suspension monorails. The single-wire technology will transfer energy between a power supply and various distribution points and subsequently reduce the number of conductors required. Furthermore, the use of single-wire technology minimizes the risk of electric shock and/or explosion.

The integration of the rail will be one of the elements of transferring the energy, which will be the focus of another subsystem. Integrated rail will be able to wirelessly transmit energy to a receiver located in a machine (moving on that rail) and to online monitoring of selected parameters responsible for the HEETII system's safety.

The last subsystem of the HEETII system will consist of a monitoring and control system of the power supply network, the development of which the AMT oversees. This subsystem will be able to record electrical parameters of the power supply network online and send data from the sensors to the mine surface. The AMT will develop a platform to monitor essential parameters of the system and the environment such as current, voltage, humidity, temperature, etc. and that can forward the data for further processing. From the information obtained, the subsystem will regulate the distribution of electricity, which improves the energy efficiency of the mine network.

The development and integration of the individual subsystems into a complete prototype will enable tests to be carried out in the mine. This will enable the certification tests to be carried out and the subsequent implementation of the HEET II system in the underground coal mines.

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