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Methane Outburst Problem in Donbass Region

Along with the traditional emissions from industrial plants and motor vehicles in the mining regions of Ukraine, including the first in the Donbass, a significant share of emissions of methane emissions are added to the ventilation and degasification systems coal mines. In contrast to the industrial emissions of coal mine methane emissions are invisible and odorless, so little about their presence known to the public, and not enough attention is paid.

The share of coal mine methane emissions in the Donbass region is significant . According to reports, the example of mine " Suhodolskaya - Vostochnaya ", which refers to the gas-bearing mines of Donbass methane emissions in 2009 amounted to 26, 28 million m³ . And there are mines in the Donbas about a hundred. At present, the development of gas-bearing coal seams ventilation and degasification systems are extracted from the mines of Russia 1, 2, and 1, 4 billion m³ of methane, but only about 25% of the extracted drainage systems , of which only about 45-50 million m³ of recycled , the rest is released into the atmosphere , contaminating its strong greenhouse gas. About the same condition CMM is also in the Ukraine.

It is necessary to elaborate on the secretions of coal mine methane. Allocation of coal mine methane can be divided into three types:

- Allocation of methane through cracks and fissures in the earth's crust;
- Allocation of methane in the air, the release of the mine workings;
- Allocation of coal mine methane from coal-bed methane drainage wells.

Allocation of coal mine methane from coal-bed methane drainage wells are the main sources of emissions and air pollutants. High concentrations of methane (80%) in these emissions and the possibility of centralized collection and processing allow to use it as a source to generate electricity, heat and compressed methane refueling vehicles, while significantly reducing harmful emissions into the atmosphere.

Disposal and use of coal mine methane not only solves environmental problems, but also important for economic reasons because it enables significantly cheaper fuel gas for heat (in the boiler) and electric power.

In conclusion, it should be noted that in order to reduce emissions of methane, which are some of the major pollutants of Donbass, you need to actively implement the installation for waste to produce electricity, heat and compressed gas for fueling vehicles. The introduction of such facilities will improve the environmental situation in the Donbass.