

Volodymir Kovbasa  
O.O. Yavorska, research supervisor  
L.O. Tokar, language adviser  
SHEI «National Mining University»,  
Dnipropetrovsk

## **Drilling a Ventilation Hole in “Yubileinaia” Mine of “DTek Pavlogradugol” PJSC**

Today mining industry of Ukraine is one of the most important branches. Withdrawable coal is essential energy feedstock for a number of industrial enterprises of the country. In Ukraine, black coal is the only energy feedstock which reserves are enough for several centuries. Hence, it is required to develop mining industry by means of new field development, and increase in life of available mines.

In 2008 “DTek” company approved a program of coal mining. The program made a decision of co-developing and drilling the third block of ventilation hole in “Yubileinaia” mine jointly with “Spetsshakhtoburenii” OJSC.

The hole drilling opens a prospect for “Yubileinaia” mine for the near 30 years.

The hole is drilled with the help of German drilling rig L-35 of “Wirt” company. Drilling materials are discharged in clarification tank with the application of so-called airlift technique being specific. The technique was chosen as the most reasonable and progressive method for shifting sand zone.

Ventilation hole #3 has 4.3-m minor diameter; its depth is 385 m, and its hole mouth, conductor share, and main body are properly locked with the help of metal pipes with observance of all rules (drilling, use of drive pipes, hole clearance tamponage).

Upon completion of the hole boring, it has been fixed. Then, armouring started. The ventilation hole armouring is metal and rigid. It consists of following parts:

- 170\*104\*12 boxlike buntons which step is 4.168 m.
- 4 lines of rail guides P43.
- 2 support paths for five control cables and communication cables.
- 1 path for four power cables.
- Machine in transition with level 370 m. And
- Covering bridge.

In April, 2012 there was started erection of fan system building. That very spring there were erected 4 potable water storage tanks and fire water tanks, and storage capacity of each is 250 m<sup>3</sup>.

It is planned to put the hole in commission by the end of 2013.

Taking into account abovementioned, one may say that the project implementing will help to increase extent of production, to promote industrial safety, to extend the period of the mine operation, and to optimize mine ventilation diagram and transportation chain.