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## VENTILATION SYSTEM AS A PERMANENT SOURCE OF ENERGY

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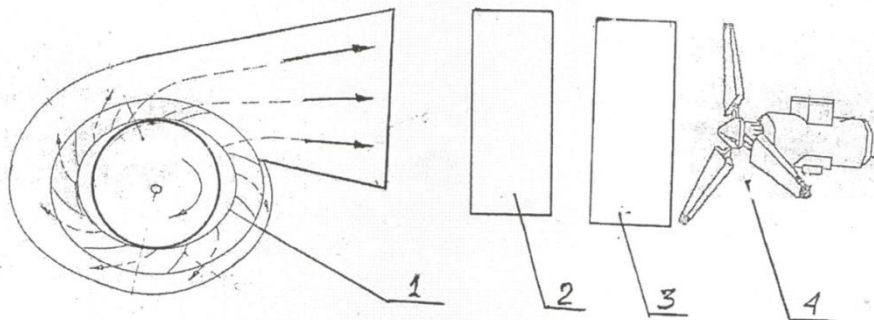
The fan is called the machine, creating a pressure difference in the air line, which moves under the influence of air into the latter. Conventionally, to fans include machine creates a pressure difference of up to 10,000. The total length of the workings, which moves air in modern mines can reach 120 km, and their number is several hundred km. For the ventilation of large mines served 20-40 thousand m<sup>3</sup> / min of air. The largest main fans have the impellers with a diameter of about 5 meters and engine capacity of up to 4000 kW. They create a pressure up to 9000 Pa at an air flow of 600 m<sup>3</sup> / sec. It's very big power!

Vane wind turbines with horizontal axis are the most common type of wind turbines. Power wing turbine depends on the wind speed and scope of wind turbine blades.



Modern wind turbine vane type consists of the following structural elements:  
 1. The turbine blades 2. The rotor 3. Directions of rotation of the blades 4. The damper 5. Drive Axle 6. The mechanism of rotation of the blades 7. Generator 8. The rotation of the controller 9. Anemoscope and wind sensor 10. Shank anemoscope 11. Gondola 12. The axis of the power generator 13. The mechanism of rotation of the turbine 14. The rotation of the motor 15. Mast.

As for the wind turbines is a key requirement for the presence of constant wind, I came to the conclusion that the location of the wind turbines on ventilation systems of mines is a very beneficial step.



1. The output of the ventilation system 2. The zone of turbulent air movement 3. The area of the laminar air flow 4. Wind turbine.

That it may be easier to understand the essence of the project, I made a dummy.



## Conclusion

Based on all the above, the application of the experimental setup in the industry will benefit economically and environmentally. Firstly, we will reduce the energy consumption. Secondly, the new system of getting energy does not adversely affect the environment. Thirdly, it is - a huge prospect for energy. Fourthly, the independence from the influence of external natural forces. And this is not a complete list of benefits of getting energy using a mine ventilation system.

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