



INNOVATIVE SYNCHRONOUS MOTOR WITH HIGH-POWER PERMANENT MAGNETS

Ideas on utilisation

An innovative, energy-saving synchronous motor with high-efficient and high-power permanent magnets - for specialist applications in mining machines (pumps, high-power fans).

Potential adopters of technology

The technology consists of technical documentation and a prototype motor operating and tested under real conditions. The basic technological parameters of the motor

- power 1000 kW
- supply voltage 6000 V
- stator current 102 A
- power factor 0.97
- efficiency factor 97.4%
- rotational speed 375 rpm
- inrush current 5.8 In
- starting torque 1.7 Mn
- static overload with torque 1.75 Mn

Advantages of technology

The basic innovation of the technology is such a design of the motor that allows the elimination of inductive reactive energy intake as well as the reduction of electricity losses in the motor and in the transmission equipment.

The main market advantages of the motor

- Outstanding high efficiency (97.4%) in this motor class;
- Possible higher electricity savings compared to competing models;
- Smaller dimensions of the motor and ultimately the machine in which it will be mounted;
- Lower weight of the motor and ultimately the machine in which it will be mounted

Market and context of technology

Due to the above technical characteristics of the motor, high power and high efficiency, it will be mainly used in high-power pumps and fans to work in special conditions, especially dedicated to the mining industry.

Preconditions in adopting enterpris

Not expensive investment (for an established producer).