

FEEDER ELECTRIC DRIVE IMPROVEMENT

Rudenko A. U.

Scientific advisor - assistant, Sadovuy O. S.

Mykolayiv National Agrarian University

(54020, Mykolaiv, street of Georgiy Gongadze, 9, department of Tractors and Agricultural Machinery, Operating and Maintenance, tel. (057)712-28-33)

E-mail: andrey0911r@gmail.com

The development of technological tools is a complex process based on the interests of production, requiring advanced technological processes, namely, the reduction of mass production figures leads to an increase in the efficiency of production on the basis of a more complete utilization of all the reserves of electrical equipment.

Currently, special asynchronous motors (AM) which using for conveyors are introduced by requirements to level of vibration and noise for the pig farm. Technical level of the transporter equipment can be increased the by using of special asynchronous motors with an external rotor (AMER) and slow-moving asynchronous motors (SAD) with increased constructive adaptability to conveyors.

Purpose of the work - replacing the node (engine - gearbox) to a less massive and more economical electrical equipment. Namely on the engine of the nonconventional design "with an external rotor".

There are three groups AMER, differing in design execution and technological purpose.

One of the groups is AMER with a console rotor, consisting of a magnetic circuit with a short-circuit winding, which are connected to the cup-shaped housing, fixed to the rotary shaft.

The other group includes AMER, in which the rotors completely cover the stator, and the elements of the construction of such rotors are also part of the working mechanisms (the rotor contains the hub of the fan impeller, or the working body (the rotor body is the leading pulley conveyor belt)).

The third group includes AMER, in which the external rotor is not a working mechanism, and the rotating moment is transmitted through a shaft, connected to an external rotor, which has one cup-shaped body or two bearing shields.

In this section an analysis of feeder transporters for the pig farm was made. The object of modernization was the selected transporter - feeder TKR-20A, which is intended for the distribution of dry and granulated feed. Because TKR-20A is designed for 500 heads of reproductive herd with careful dosage.

Also was uncovered a question of enhance the technological level of the conveyor advances through specially designed electrical power conduit and transporter electrical motor. In section 3, there are three main types of asynchronous motors. For calculation and installation was selected an asynchronous motor with an external rotor.

Since it provides a replacement of overall units (reducer) to more modern ways to problem solving. In the last paragraph of the third section, transporter's electric drive frequency of rotation calculation was made.