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In the work predstavlenы Theoretically Results of research of influence vybratsyonnыh forces on the transport of process indicators-smeshyvanyya. The scheme rheological STATUS kormosmesey vibration pod actions.

Rheology, kormosmes, Vibrate, voltage shift, viscosity.

The paper presents results of theoretical studies of nfluence of vibrational forces on parameters of transportation-mixing. The scheme of rheological state of forage mixture under vibration is submitted.

Rheology, forage mixture, vibration, shear stress, viscosity.

UDC 631.331.54

Experimental device for laboratory research accuracy of dosing process SEEDS

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In the paper the experimental setup, which withthrough studies of pneumatic sowing device for the accuracy of its key features. Displaying installation structure of the scheme and describes how it works.

Pnevmomehanchnyy seeding machine, experimental setup, the exact crop, seed sowing, dosage.

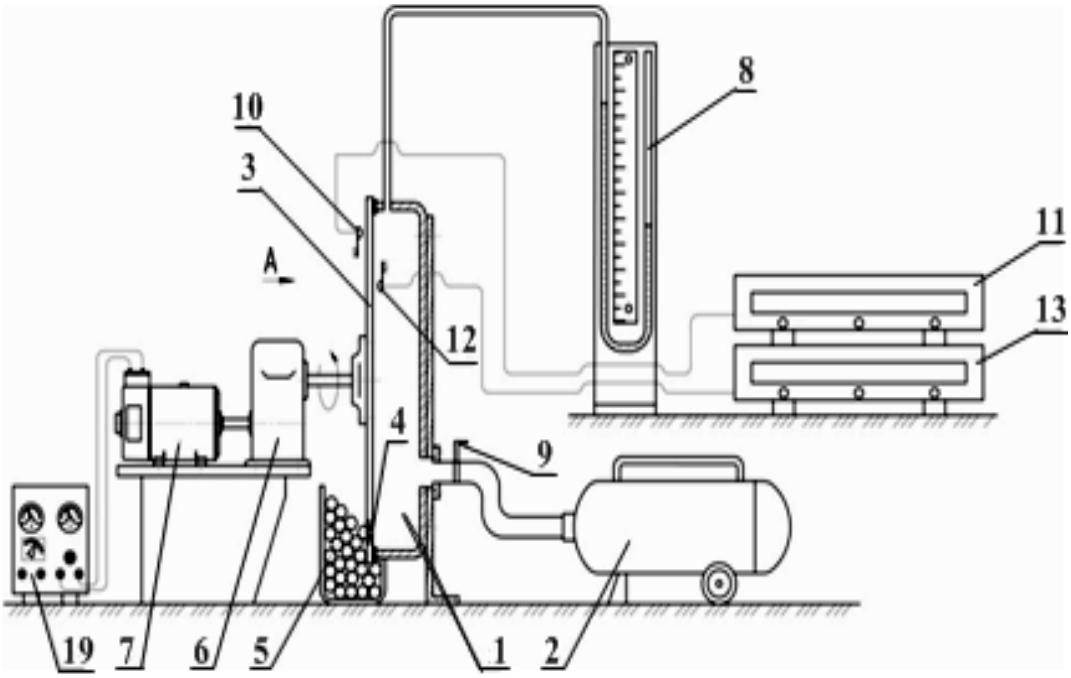
Problem. Research to identify key indicators of quality and precision seeding row crops pneumatic sowing device requires laboratory facility, which may make a preliminary analysis of pneumatic device.

Analysis of recent research. The formulation of the experimental setup and the principle of dispensing seeds and allocation of the total weight of pneumatic apparatus [1, 3]. As in the series pneumatic sowing device, dosing element is a movable disc with cells arranged with a certain angular step (Fig. 1).

The purpose of research. With the proposed laboratory setting neobhыdno ensure accuracy indicators to determine seeding crops.

Results. General view of the experimental setup is shown in Fig 2.

*** Supervisor - PhD Al Boyko**



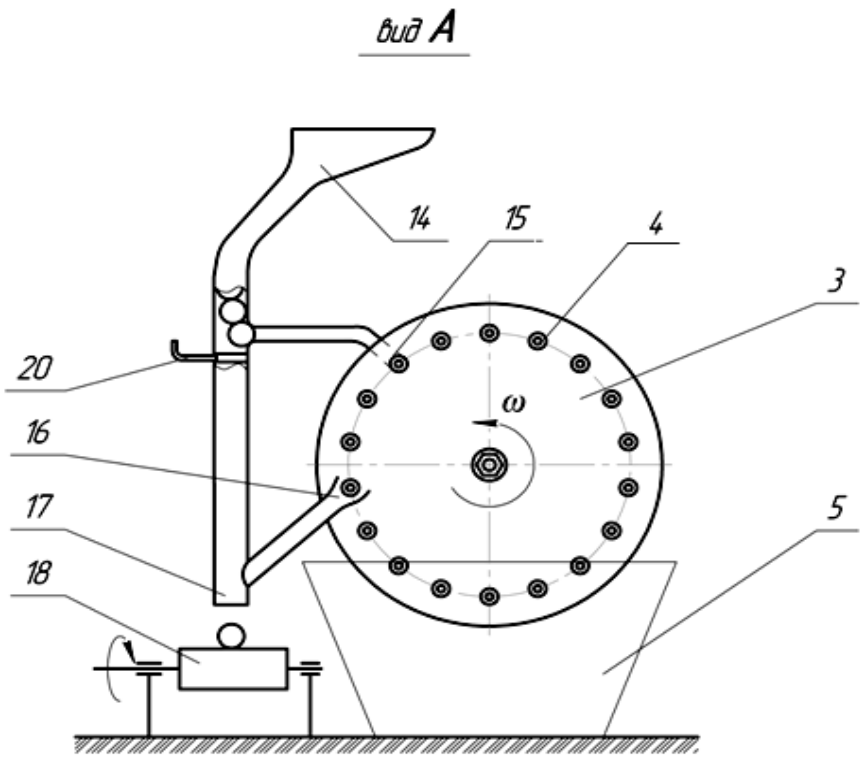


Fig. 1. Scheme of the experimental setup NTS-2 for precision seeding research 1 - vacuum chamber; 2 - extractor; 3 - seed disc; 4 - prysmoktuyucha cell; 5 - chute; 6 - gear seed disk drive; 7 - motor 8 - vakuumetr; 9 - control dilution; 10 - speed sensor; 11 - Frequency measurement speed rotation of the disk; 12 - gauge crossing seeds; 13 - Frequency counting propuchkiv; 14 - Reserve dispenser; 15 - sensor triggering reserve the dispenser; 16 - catcher; 17 - napravlyach adder; 18 - transporter; 19 - drive control unit; 20 - switch backup dispenser.

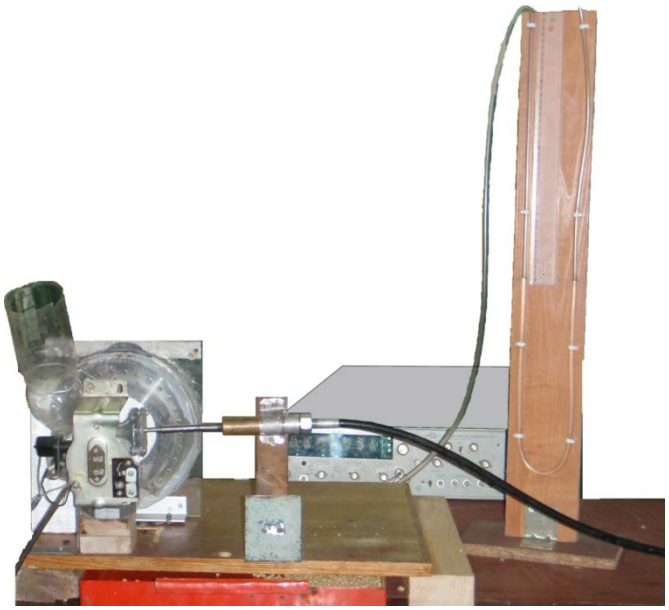


Fig. 2. General view of the installation NTS-2 operational during the pilot study.

Powered setting follows. The torque of the engine 7 through gear 6 is transmitted to the seed disc 3, which is set in rotary motion with the required frequency. In its angular displacement seed metering drive with prysmoktuyuchymy cells 4 passes for one turn all stages of the operating cycle of pneumatic sowing device capture seeds to be dropped on the conveyor sown seeds 18.

Filling the seed metering cells is performed in the chute 5 for prysmoktuyuchoyi force acting in the opening cell as a result of dilution air on the other side of the disc is in the vacuum chamber 1.

Level required dilution created extractor 2 and set the regulator dilution 9. Controlled dilution liquid using a vacuum 8.

An important parameter is the speed of the unit cell relative displacement metering seed mass in the chute [2]. With a constant radius placement dosing disc cells relative to the center line speed is determined by its angular velocity (rotational speed).

It is modified by the DC motor 7, which the power from the power regulation 19. Wiring to regulate engine speed is shown in Fig. 3.

Rotational speed of the sowing drive is controlled by the sensor 10, each rotation gives a pulse signal to the input frequency meter mark 11 CHZ-38.

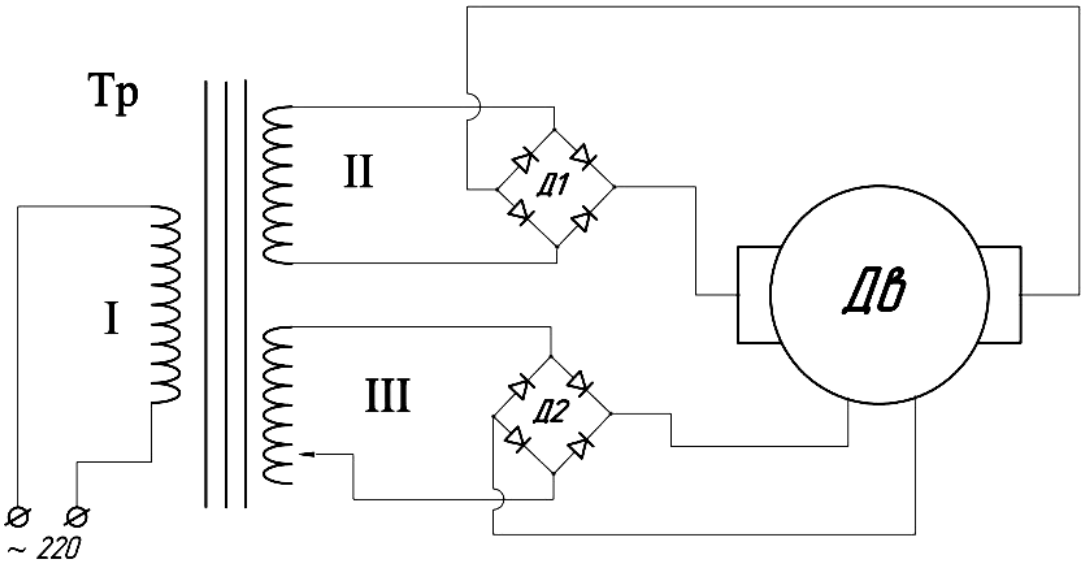


Fig. 3. Wiring seed disk drive motor to adjust the speed: DV - DC motor; D1 - diode bridge winding; D2 - diode bridge anchor; Tr - power transformer.

Structurally, the sensor is an electromagnetic head (Fig. 4a), which is fixed motionless and magnet (Fig. 4, B) which is attached to the drive of dosing.

a) b)

Fig. 4. Items speed sensor rotation and counting the number of revolutions of the disk seed: and - electromagnetic head; b - magnet.

Pulse signal from the sensor turns 10 counts frequency meter 11 and the information on speed, or the total number of turns (operating time is displayed on the front panel of the device.

Space (not filled) cells at work sowing disc recorded with a special sensor passes 12 seeds pneumatic type. It is a certain rozvaltsovanu tube diameter, wound in a vacuum chamber and mounted on a trajectory moving cells with some gap. If there are gaps in the tube there is air pressure gauge by which the contacts are closed and the sensor. Impulse, current resulting from it is fed to the input of the second frequency meter mark 13 F-571, which has been assessed and the number of spaces.

Similarly, the sensor passes sensor is triggering backup dispenser 15. The normal position through the sensor tube rozvaltsovanu dilution of the vacuum chamber is transferred to the backup dispenser 14. efforts occurring in the dispenser, held last seed from a possible fall under its own weight. In the case of admission (nezapovnennya cell) seed disc vacuum in the tube sensor falls, disappears and retention efforts seed reserve feeder moves through the adder-napravlyuvach 17 on tape conveyor 18.

Conclusion. Laboratory institution established itself on the positive side, namely, by the help of certain key indicators precision sowing, optimal modes pneumatic sowing device that enable on the basis of findings describe the process of pneumatic sowing machine.

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In the Article prevedena Experimental plant, P pomoshchju kotoroj provodyatsya Studies work pneumatic mechanical vыsevayuscheho apparatus for ego accuracy of Execution major functions. Showing stroenye installation ee scheme and described principle ee work.

Pnevmomehanchnyy vыsevnoy apparatus,Experimental plant,tochnыy posev,Semen,posev,dozyrovanyya.

The paper presents experimental installation,by which conducted research of work pneumomechanical sowing apparatus on accuracy of performance its functions. Is shown the structure of its installation scheme and described principles of its operation.

Pneumomechanical sowing apparatus, experimental installation, exact crop, seed, seeding, dosage.

UDC 629,631,554

ANALYSIS bandwidth Transport and technological KOMPLEKSUZ BEZBUNKERNYMY harvesters

***SG Fryshev, Dr. NAU*for**

The method of analysis bandwidth harvesting and transport complex bezbunkernymy harvesters for forage crops to improve its parameters.

Throughput, bezbunkerni harvesters, transport tools, analysis methods, ways to improve.

Problem. The total throughput processing chain assembly-transport sector (hereinafter - ZTK), which includes harvesting combines (hereinafter - HCC) and vehicles (hereinafter - TC), defines and limits the first link. At the same time, the second link bandwidth can be significantly higher. If so, the chain is working at peak performance, but the capacity of the second level (a resource) remains partially unused. A significant difference in the second link bandwidth compared to the first - is the difference, which can reduce the decrease in the number of cars ZTK by changing certain parameters of rational processes.