Abstract.*In Article predstavleny results justification analytycheskoy model recovery mechanism rabotosposobnosty machines lesotehnycheskyh ee works and use.*
Keywords: model, Restoration, rabotospo-sobnost

Annotation.*The paper presents the results of the analytical justification models mechanism for disaster recovery vehicles forestry works and its use.*
Key words: model, recovery efficiency
UDC 621.926.4

DETERMINATION OF THE MECHANICAL PROPERTIES OF THE GRAIN MATERIAL OBJECT AS KORMOPRYHOTUVANNYA

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Abstract.*The article contains a description of the test equipment used at the Department of Mechanics NUBiP Ukraine to determine the mechanical properties of grain materials influencing energy consumption in the kormopryhotuvannya.*
Keywords: grain, mechanical testing, energy costs kormopryhotuvannya

Formulation of the problem. Grain material is valuable and irreplaceable source of energy for the existence of pets and livestock production. Each group of animals exposed to the best of its assimilation in certain structural conditions and if certain particle size and hranulomorfolohichnoyi characteristics of the treated material.

To ensure such diversity currently used in fodder production equipment of various designs with a wide class of workers [1]. However, changes in climate forcing to apply, every year, more new, more resistant varieties of crops, which makes typing some adjustments in the operation of this equipment at the same time raises the question of reducing energy costs in the kormopryhotuvannya.

In the process of grinding grain material the load on the working bodies of cars on depends on the mechanical characteristics of grain material, which in turn are likely to change depending on many factors [2]. Therefore, without the knowledge of reliable information about the actual mechanical characteristics of raw grain is not possible to create a reliable and modern energy efficient equipment.

Analysis of recent research. Flowing grain in today's technological equipment is due to several kinds of deformation:

compression (lamination), shear (grinding), and due to dynamic loading (impact). Type the same strain of grain selected from speculation ensure minimum content

dust-like fractions (compliance with feed grain size), that the greatest possible saving energy value feed and reduce energy costs.

Results. In determining the parameters of strength and deformability of grain used under compression testing machine FM-1000 with devices that simulate rollers working bodies (Fig. 1). To fix the experimental data used kompyuteryzovani measuring systems Specimen fixation with a frequency of 18 Hz data, FastReg, with a frequency of 2400 Hz to fix and Test with a frequency of 20,000 Hz. To measure the load used tenzodynamometr GOST-50 with discrete load measuring 1 H, to measure strain using strain gauge IMDT 20 of discrete measurement displacement of 1 micron, measurement error does not exceed ± 0,5%. As the supports in metal cylinders with diameters corresponding to the diameters of rollers working machines.

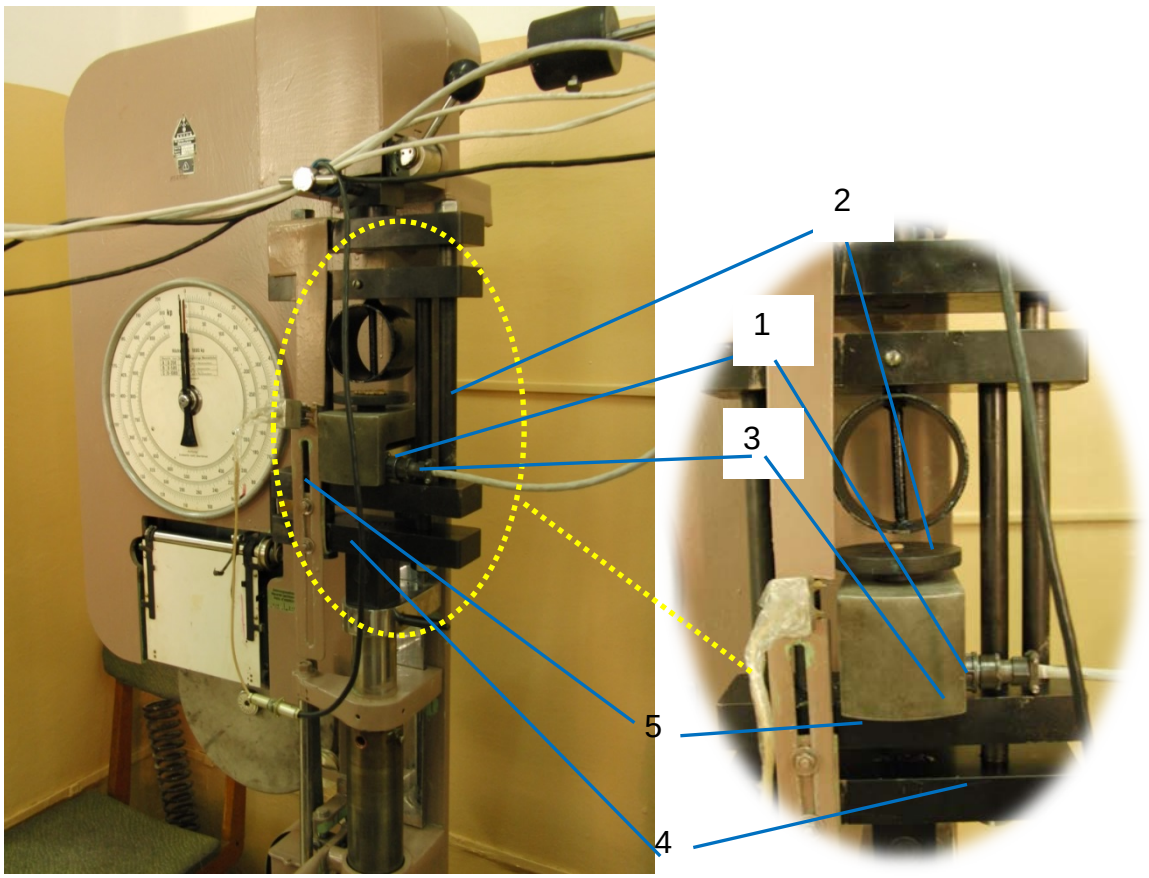

Fig. 1. Testing machine FM-1000 with established device for determining the mechanical properties of the grain in the interaction with sledge assembly working bodies:
1 - prototype; 2 - movable cylindrical support; 3 - fixed support; 4 - tenzodynamometr; 5 - strain gauge.

The test machine FM-1000 provides up to 1000 kgf loading, variable speed load rigid system of 2 to 90 mm / min. strength device is equipped with a device for measuring the movement of the movable arms.

Tenzodynamometr GOST-50 provides a record load from 0 to 50 kN, strain gauge IMDT provides 20 fixation strain from 0 to 20 mm. If necessary, install the available opportunity of moving rollers that fully meet your real body grain-processing machine.

Because of the natural variation in the mechanical characteristics of grain and one of the same culture is necessary to determine the properties of grains (sample). For this reason the adaptation of polygonal surfaces (Fig. 2). The size of the sample is selected or the necessary amount of grain, or the necessary surface area.

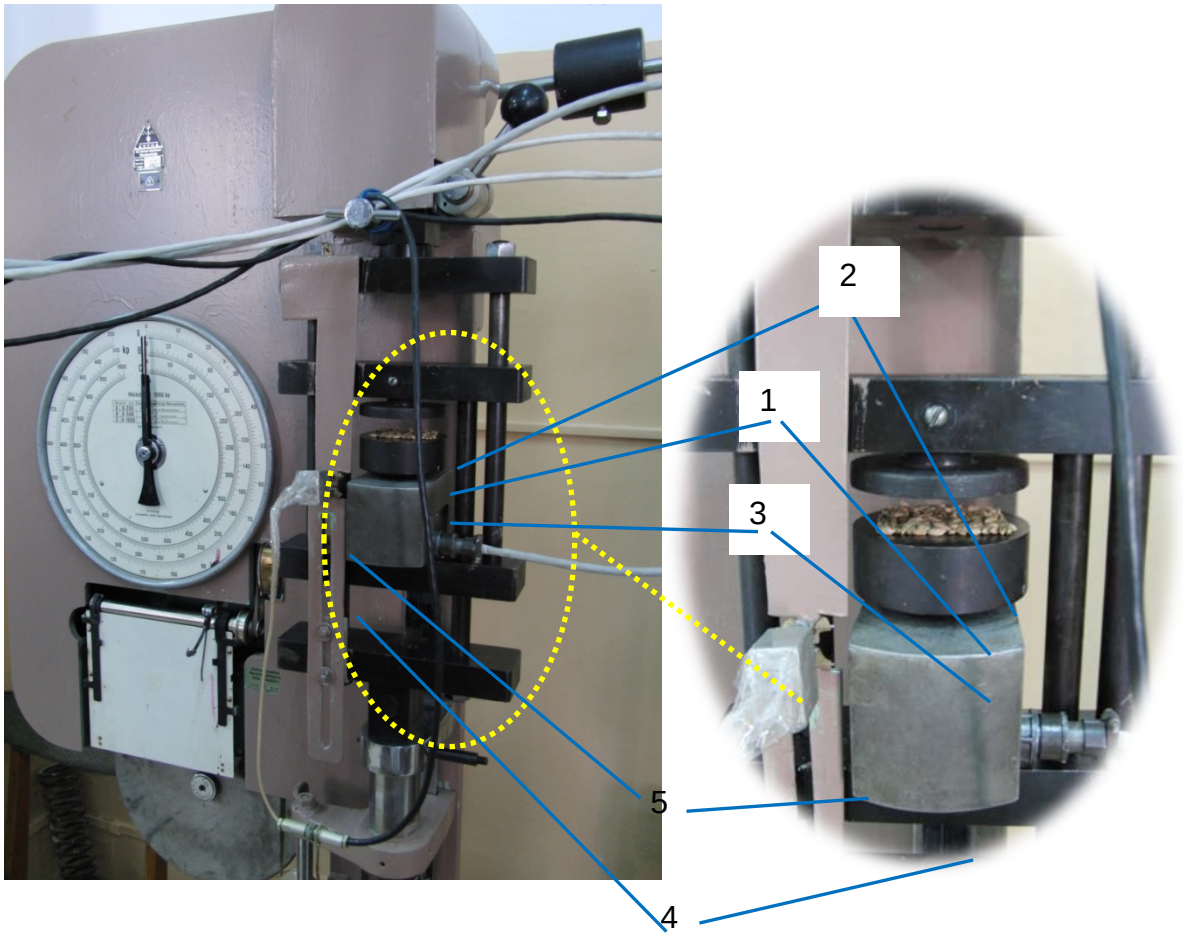

Fig. 2. Testing machine FM-1000 with established device for determining the mechanical properties of the sample of grain in the interaction with polygonal assembly working bodies: 1 - research test; 2 - mobile support; 3 - fixed support; 4 - tenzodynamometr; 5 - strain gauge.

After determining the breaking load and deformation at the time of destruction and, therefore, energy performance and

hranulomorfolyhichnyy grain stocks are determined by a known method using a set of sieves.

To determine the mechanical properties of the grain during dynamic loading pendulum driving machine using IC-0.5 (Fig. 3) with variable hammers and the maximum amount of energy 50 kH's · cm.

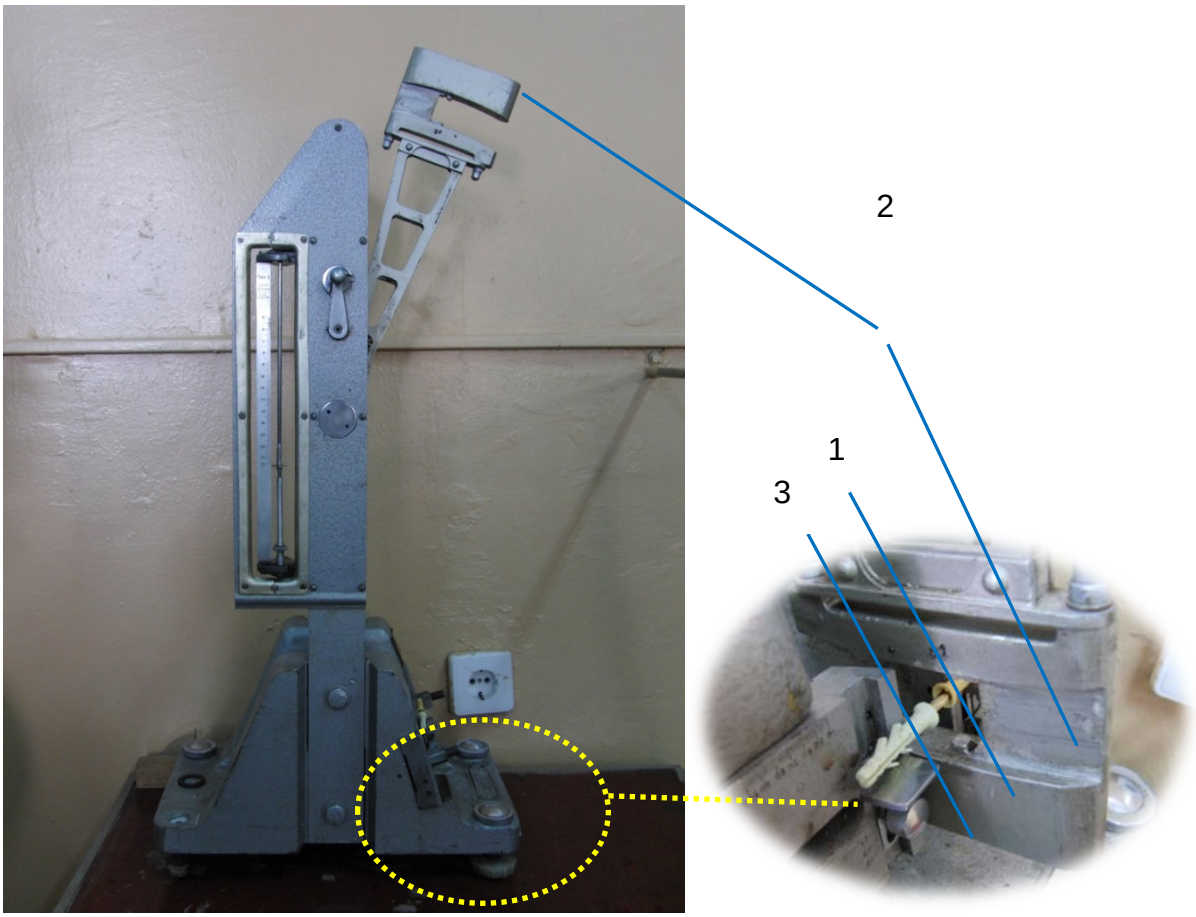

Fig. 3. Pendulum Machine MK-0.5 of the device for determination of dynamic fracture grain collection:
1 - prototype; 2 - hammer 3 - holders.

To implement dynamic loading of grain pendulum driving machine is equipped with special holders that allow you to keep grains at the time of the strike hammer. Scales pendulum copra allows you to directly record the work spent on the destruction of discrete grains of 0.2 and 0.4 kH's · cm. Grain and grain hranulomorfolyhychnyy composition of the test is determined by the same method.

Conclusion. So determining the mechanical characteristics of grain material in the process of deformation in many ways is the key to creating reliable kormopryhotuvalnoyi technology that will provide the appropriate quality processing of raw materials and provide information necessary to design solutions that will process grain material different classes on the same machine by minor technical regulations.

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Abstract.*In the description of the article are yspытatelnoho equipment, kotoroe yspolzuetsya at the Department of Mechanics NUByP Ukraine for grain definitions mechanical properties of materials, kotoryya vlyyayut on эnerhetycheskye zatratы in the process pryhotovlenyya fodder.*

Keywords: grain, mehanycheskye trials, эnerhetycheskye zatratы, kormopryhotovlenyya

Annotation.*The paper contains description of test equipment in use at the Department of Mechanics NULES Ukraine for determine and mechanical properties of grain materials that affect energy consumption during feeding process.*

Key words: grain, mechanical testing, energy costs, feed preparation

UDC 631,363

EXPERIMENTAL STUDY OF grinding grain crusher VALTSEDEKOVOYU

SE Potapova, Ph.D.

Abstract. *The results of experimental studies of the process of grinding grain crusher feed valtsedekovoyu on which it reasonably rational parameters.*

Keywords: grain grinders, valtsedekova crusher, grinding module, coefficient of variation

Formulation of the problem. Complete feeding any and all types of livestock and poultry involves the introduction of the feed rations of feed grain, the fate of which is from 30% to 80% of the diet structure [1, 2].

To improve the nutritional value, rational use of grain feed use different methods of pre-treatment and preparation for feeding. However, one of the main and most common process is grinding operations [3, 4].