

3. *Pronykov AS Parametrycheskaya nadezhnost machines / And.S. Pronykov. - M.: Bauman th. Bauman, 2002. - 560 p.*
4. *FromOrin VA Nadezhnost machines / In the.A. Zorin, B.C. Bocharov. - Eagle: OreIHTU, 2003. - 549 p.*

*In this article shows the characteristic abilities Comparative definitions of major defects and povrezhdenyy, которые ymeyut details of agricultural machines, nerazorytel'nyy control and diagnostics of machines.*

**Co.ntrol, malfunction, methods, holography, ynterferentsyya detail, nadezhnost, level.**

*There is resulted comparative description of possibility of exposure of basic defects and damages which have the parts of agricultural machines, by the non-destructive control and diagnostic machinery in paper.*

**Control, defect's determination, methods, holography, interference, details, reliability, level.**

UDC 631,362

## **MAIN TYPES damaged parts RESHITNYH ZERNODROBAROK**

***From.A. Morozovskaya, graduate student \****

*Rozhlyanuto problem of failure of the main working reshitnyh zernodrobarok and their impact on the quality of grinding grain.*

***Zehrnodrobarka, sieve, millibnyuvalni hammers, fan operation, operation.***

**Resolutionska problem.** Pivnomirne grain refinement improves absorption of nutrients animals, and reducing energy consumption in chewing feed. It is possible to obtain high-quality feed mixture.

Volumein such machines must have high reliability and durability. To identify the factors that cause certain types of failures is necessary to analyze the work of crushers for further deficiencies. In the hammer crusher,

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aboutAIN working bodies engaged in the destruction of the material is a rotor with hammers and sieve deck. The negative impact of operation is the cause of failures such details kormodrobarok as: hammers, fan blades, pipelines, decks, bushings and sieves. The main reason for failures is crushers wear, resulting in changing the geometric parameters of parts. The weakest parts and components are the hammers, the rejection of which are 27% of the total failures crushers, fan wheels - 21% and sieves - 19%.

#### **AnaLease**

#### **Finalnnih**

#### **dperssurvey findings,**

literary and

Patentnyh

Sources indicate that the prospects of mechanical engineering technology and development tools for the manufacture of animal feed performance to increasing the quantity and quality of production can be achieved by improving zernodrobarok. However, Ukraine does not apply where a broad introduction to using it.

#### **Metand**

#### **dperssurvey findings.**

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grainnodrobarok and establish ways to eliminate these problems effectively proceed.

#### **Rezultaty research.** Most hammer crushers

important role in the crushing of materials plays a speed factor of the flow of grain.

Prand this crushed material popadayuchy to sieve through holes are removed from the crush chamber and sent to the cyclone and airflow helps inputted material in the crushing chamber. Typically used standalone

fan, which is located on the rotor shaft or equipped

distinctm drive. In some cases the fan and rotor are combined, resulting in better air flow used.

In most fan blades wear falls on the bend (Fig. 1). Size of grinding defined established in

mill sieve. When grinding the grain mass often a crusher set of sieves smooth punch holes 3, 4, 6, 8 and 10 mm, made of sheet steel thickness 1 ... 3 mm. Establishment of a crusher sieves with different diameter holes lets you adjust the fineness of grinding.

Prandcozhnomu blowand

moTraysandaboutto grainto

modbuvatymetsya

rozkowording and its reflection on the wall where the sieve material that has not passed through the holes in the air stream is captured and under repeated blows of hammers and installed in addition dopodribnytsya deck. The impact of the grain against the verge of sieve results in partial destruction of machining that when the flow of traffic will be subject to destruction sieve openings. And when hit

foreign objects, mainly not of metal that is not captured magnet, leading to his punching (Fig. 2). Then the need for a new replacement.



Ric. 1. Wear fan wheel.



Ric. 2. Samples sieve crusher.

The effectiveness of crushers and grinding is also influenced by the degree of weight hammers, the state of their faces and the magnitude of the gap between the top edge of hammers and the surface of the filter. For grinding cereals into flour is commonly used rectangular plate hammers thickness  $1,5 \times 2,5$  mm. Hammers are made of steel 65G [2].

Wvydkist hammers is one of the main factors affecting the performance of the crusher because of its increasing Collectionilshuyetsya and frequency of hammer blows on the product and particles tion fromis the degree of grinding. Their relative displacement leads to friction and wear rate (Fig. 3). The feature of this process is the application of local character shock loads at relatively high speeds.

Wvydkist working of these machines is selected within 40-120 m / s. The most common hammers mounted

plate for crusher is with two holes (rectangular, with notches), which allows four-permutation wear in one of the working faces. Pivotaly attaching them to prevent possible accidents in contact with large solid objects caught in the crushing chamber.



Ric. 3. worn hammer mill.

Practices and use crushers shows that the cause of failures crushers is failure of parts subject. With the weakening of stretch belt or chain drive and with high humidity and excessive product feed feed often occurs Pile crusher. Tensioning drive belts crush governing drum pulley. Deflection line coming in at 60 ... 70N force must equal 20 ... 25 mm [1].

In the operation of the crusher to properly adjust the tension blade carrier. To do this, unscrew the lock nut and hold tensioning the canvas using special screws. Regulation should be carried out at the conveyor included.

With tensioning drive that is on the frame retrust chain tensioning mechanism drum. With a lack of tension drum will not rotate. Location deflection circuits must be within 5 ... 15 mm.

Prand vibration mills need to check whether the number of hammers and washers on each axis. The difference of weight hammers kit, washers and axle mounted on opposite aboutsyah rotor must be not less than 10 g [1].

**Conclusion.** Stillm orNom tomilch robotand Kormodrobarok obumoWleń many factors that are often found in the complex interdependence. The randomness of the formation of failures leads to disruption operability of parts and components to decrease spending reliability.

## References

1. *Directory mehanizatora-zhyvotnovoda* / [Мартынов VM, Utkin AA Shirokov Yu]. - M.: Rosselkhozyzdat, 1985. - 366 p.
2. Сыроватка V.Y. Methods of conducting tests of machines smeshyvannya Stern / In the.Y. Сыроватка, EV.Alyabev. - M.: Scientific-methodical otel VYƏSHa, 1971. - 56 p.
3. A. Nowicki Metod assess operability kormopodribnyuyuchy machines / And.In. Nowicki // Mechanization of agriculture. - K.: NAU. - 1998. - T. IV. - P. 63-68.
4. A. Nowicki In theyvchennya bounce kormodrobarok using the theory mACE service / And.In. Nowicki // Technological advances in agricultural production. - Glevaha: IMESH UAAN. - 1997. - P. 25-27.
5. Boyko AI AnAliza sysMNs calculation methods Categoriesadiynosti mAshin and Fr.ca.adnannya / And.And. Boyko, And.In. Novitsksecond, In the.And. Melnyk, From.In. Phas taken, SS Karabynosh // Journal HDTUSH. - Kharkiv, 2003. - Vol. 15. "Improving the reliability vidnovlyuyemyh machine parts." - P. 129-134.

*RaProblems ssmotreny Exit IZ Story of major organs reshetnyh workers and zernodrobylka s Effect on Quality yzmelchenyya grain.*

**Zehrnodrobylka, sieve, drobylnye hammers, fan, ekspluatatsyya, yznos.**

*The problems of failure of main working bodies reshetnyh grain crusher and their impact on quality of grain refinement.*

**Grain crusher, screen, crushing hammers, fan operation, wear.**

631,171 UDC: 519.87

## **TETheoretically basis for determining conductive PROPERTIES OF SOIL ENVIRONMENT**

**OO Brovarets, Ph.D.**

*The paper presents the theoretical basis for describing the conductive properties of the soil environment obtained by monitoring the status of agricultural land and turned empirical dependence to improve the accuracy of the results.*

**Thenchne agriculture, monitoring, conductive properties, groundwater environment.**

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