Key words: ***sowing, automatic control, two-phase method of sowing, making the slit, pressed disk, a predetermined the distribution of seeds, precision farming***

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ANALYTICAL MODEL MECHANISM rehabilitation machines for Forestry WORKS AND ITS USE

MF Kovaljov, Ph.D.
National Transport University

Abstract. *The article presents the results of justification analytical model of the mechanism of recovery machines Forestry works and its use.*

Keywords: model, recovery efficiency

Formulation of the problem. State machine elements mechanisms for Forestry work (further - cars) changes during its operation in close relationship with each other.

Analysis of recent research. To further happened terminological confusion briefly on some of the terms we use during diagnostic analysis mechanism [1, 2].

When we understand the mechanism as a qualitative assessment of the ability of an object to perform specified functions in the design. Property

object determines its ability to perform specified functions, called state parameters. If a general assessment of the mechanism to take its main output signal, then its value will directly or indirectly affect so active status options [3]. However, in each mechanism is a group of state parameters [4]. What no effect on the value of primary output, while at the same time determine the performance of individual units mechanism. These parameters have the name passive [5]. As active. So passive state parameters can be regulated than largely determined by the nature of their impact on the mechanism. For this purpose, diagnostic signals occurring during operation mechanism and perceived special instrumentation [6, 7].

Getting diagnostic analysis of the object, you must first define its main output signal [8, 9]. For tractor engine, for example, such a signal is

the effective power, for any main pump output signal is its performance (under certain conditions), etc. [10].

The next step is to determine the causes. Directly affect the value of the main output. The requirement of immediacy impact is required. If we want to get a correct understanding of the amount of the causes that affect the value of the main output mechanism. Proper identification of the causes often contributes to existing analytical dependence of the main output of the parameters, reasons. If no such dependence, the parameters are set, causes empirically [10].

Results. In turn, set parameters, the reasons are themselves the result of a number of other reasons. In determining which also required the principle of immediacy. Following such detailed causes and effects, you can achieve any level of reason, up to the molecular. If cause and effect are set correctly, that takes into account all the connections of causes and effects, the result is a causal model of the mechanism.

For practical purposes, the diagnosis is quite sufficient reasons for the lower level limited external conditions, which is a particular link mechanism. This level causes us roughly summarizes the concept of "time", although exactly at this level may be causes such as the magnitude of the applied load, traversed path, temperature, humidity, pressure, air dust, etc. However, because these causes are external to the reporting mechanism, they combined these concepts "time". It will be shown the effectiveness of this technique for the results of causal analysis.

Considering the causal analysis mechanisms, not to mention that the first practical attempt this approach to describe the process of changing the state has made arrangements Ya Ya Osis and ZP Markovic on vehicle brake system with hydraulic drive. A similar method used AR Avotin, P. Kevish, DS and Khrystyna N. Smirnov in constructing a functional model gasoline internal combustion engine. As pointed out by the authors obtained graph model systems were more illustrative than a research tool quantitative indicators links cause and effect.

Having started our research with about the same level, we then found that the causal model undergoes a very efficient analysis using a number of quantitative characteristics. To this end, we first used the analogy with the structure of the system of measuring instruments in the analysis of reasons influencing the accuracy of their testimony.

The link between cause and parameter-setting result can be described as analytical. So empirical dependence. Thus, if the parameter is the result of several parameters, causes the dependence of each of them is described under the assumption of constancy, and other parameters, reasons.

Depending These parameters are determined only between adjacent levels (principle of immediacy). In general terms, these dependencies can be represented as $П_{ci}^{N}$ ($П_{nj}^{N+1}$), Which N - The level number, i, j - Number of options at the appropriate level. index "n"And" c"Marked by cause and effect.

Using the terminology of structural analysis mechanisms, introduce the concept of the transfer coefficient S, Which is the ratio of growth boundary-setting effect to increase parameter causes when the latter tends to zero:

$$S_{jl} = \lim_{\Delta П_{Пj}^{N+1} \to 0} \left(\frac{\Delta П_{ci}^{N}}{\Delta П_{Пj}^{N+1}} \right). \quad (1)$$

This formula makes it possible to see that the transfer rate S may be a dimensionless if the value compared with the same dimensions and dimension if dimension $П_{П}$ and $П_{C}$ different. It will be shown that the final result of the calculation, this feature is not reflected.

If dependence $П_{C}$ ($П_{П}$) Nonlinear, it is obvious that the value S will have a constant value for the whole range of $П_{П}$. To simplify the practical calculation of this dependence can be approximated by a straight line using, for example, the least squares method. This, of course, there is some error, the value of which applied to the whole range of $П_{П}$. Given that the value $П_{П}$ and $П_{C}$ As a rule, changing only a small area of the range of possible changes, direct approximation can be made only for this area, which significantly reduces the error of approximation.

Dependence $П_{C}$ ($П_{П}$) Can be both direct and reverse. In the latter case, the coefficient S will have a minus sign, which indicates that the increase option - causes decreases the parameter of the investigation.

Transfer rate S serves as an aid to determine the number of other quantitative relationships between parameters. It is significant that all communications, except due to reason "a" probabilistic component in the value of the transfer coefficient is very small (except for the instrumentation errors present in the empirical relations).

Between the lower level parameter change and changing "time" as there is a dependence that can be described gear ratio. This transmission ratio reflects the dynamics of setting time. It is the ratio of growth to increase the parameter of time. Unlike conventional transmission coefficient is the ratio we called dynamic factor D option.

It is clear that each of the options included in the causal model of the mechanism should have a coefficient of dynamic, since the change of the setting makes the share and option-cause that has a direct

relationship with the parameter "time" that is for determining the dynamic D_i a parameter Π_{Ci} Associated with dependence parameter $\Pi_{\Pi j}$.

It follows that $\frac{d\Pi_{ci}}{d\Pi_{nj}} = tg\theta$ and $\frac{d\Pi_{nj}}{dt} = tg\alpha$, resulting $d\Pi_{ci} = tg\theta tg\alpha$

where:

$$\frac{d\Pi_{ci}}{dt} = D_t = tg\theta tg\alpha = S_{ji} D_j \quad (2)$$

Conclusion. Thus, for determining the dynamic i-s parameter N th level is necessary to know the transmission rate between j-s parameter $(N+1)$ Th level, i-s parameter N th level and dynamic factor j-s parameter $(N+1)$ Th level.

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

AP Pylypenko, Ph.D.
MG Chausov, PhD

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: