Zehrbut, shovel, yzmelchenye grain, Options, terms yzmelchenyya, analytycheskye addiction.

In paper the terms destruction of grain are considered at shock co-operating with hardly envisaged shoulder-blade, energy of destruction and corner of reflection of ground up particles are certain, that allowed to ground possible productivity of work of grinding down in theory.

Grain shovel, grain refinement parameters milling conditions, analytical dependence.

UDC 631: 372

ENERHOZASOBY INTEGRAL layout: REALITIES AND AREAS OF IMPROVEMENT

D.In. Shkarivskyy, Ph.D.

Statementbut an analysis of integrated structural and Layouts power means agricultural land.

Mobilnyy power tool layout, integrated layout, design and development.

Resolutionsca problems. Mobile power tool (MEW) is the basis for the creation of machine-tractor units (AIT). The effectiveness of its use in the unit and volume manufacturing operations that can be performed with its use determine the composition tractor fleet management, and hence the cost of the final product. Recently traktorobudivni company significantly expanded its range of products including the production of non-traditional vehicles for a design-layout circuits (layouts), including integrated. It made changes in pricing policies of companies and not always had a positive impact on the cost of the final product of agriculture.

In such circumstances are relevant question that addresses the areas of structural and Layouts MEW and comply with the provisions of the state target program
Reactivementation technology policy in agriculture.

AnaLiz recent research. With the advent of integrated design-MEW Layouts vysvitylysya and problems that accompanied it, preventing unleash the expected benefits. The main problems were rather limited range of machines and tools and aggregation conditions are available from machines and tools. In this regard, scientists and engineering industry concentrated its efforts on the development of machines and tools for aggregation of MEW integrated layout and improving conditions for aggregation that are rarely reduced to improve the overall layout of the power means. The results of individual studies of these areas outlined in [1-4].

Metand dperssurvey findings. EIDnachyty withandCategories tand directionand Rosedevelopment integrated design-layout scheme of mobile power products.

Rezultaty research. Structurally Layouts tractorand - the relative location of main components and working equipment tractor, with its functionality and allows you to use a tractor with the greatest efficiency. Structurally Layouts subordinate functional purpose tractor and characterized by size and type of engines, components and systems location, availability of space for nachiplyuvannya machines, tools and installation of process tanks, base size and crop prysvitiv road, the coordinates of the center of mass. The integrated layout appeared on modern models of agricultural tractors relatively long. Its main features are:

– the presence of three areas of free space (front, middle, back) tools for installation or technological capacities;

– the presence of an extensive system PTO shaft (GDP);

– beforecentral location or longer circular booths abouthlyadovi styu;

– fourand driving and driven wheels of equal size;

– the presence of an extensive hydraulic management tools;

– Dversuvannya move the tractor;

– high Pull-coupling and transport quality;

– required reserve engine power [5].

This arrangement facilitates closer functional association tractor with machines and tools. One of the first machines integrated design-layout scheme were type tractors MB-Truk 900 Turbo and LTZ-155 (Fig. 1). In Ukraine, the first tractor integrated design-layout scheme was tractor HTZ-120 created in the 90s of the last century - Fig. 2.

and)

b)

Ric. 1. The first production tractor integrated structural and Layouts. and - tractor MB-Truk 900 Turbo; b - tractor LTZ-155.

Ric. 2. Tractor HTZ-120.

Despite the disparity of power means integrated design layout of the signs in the availability of four driven wheels (tractor only has two front wheels driven), for the overwhelming majority of its other features include integral to the design-layout scheme.

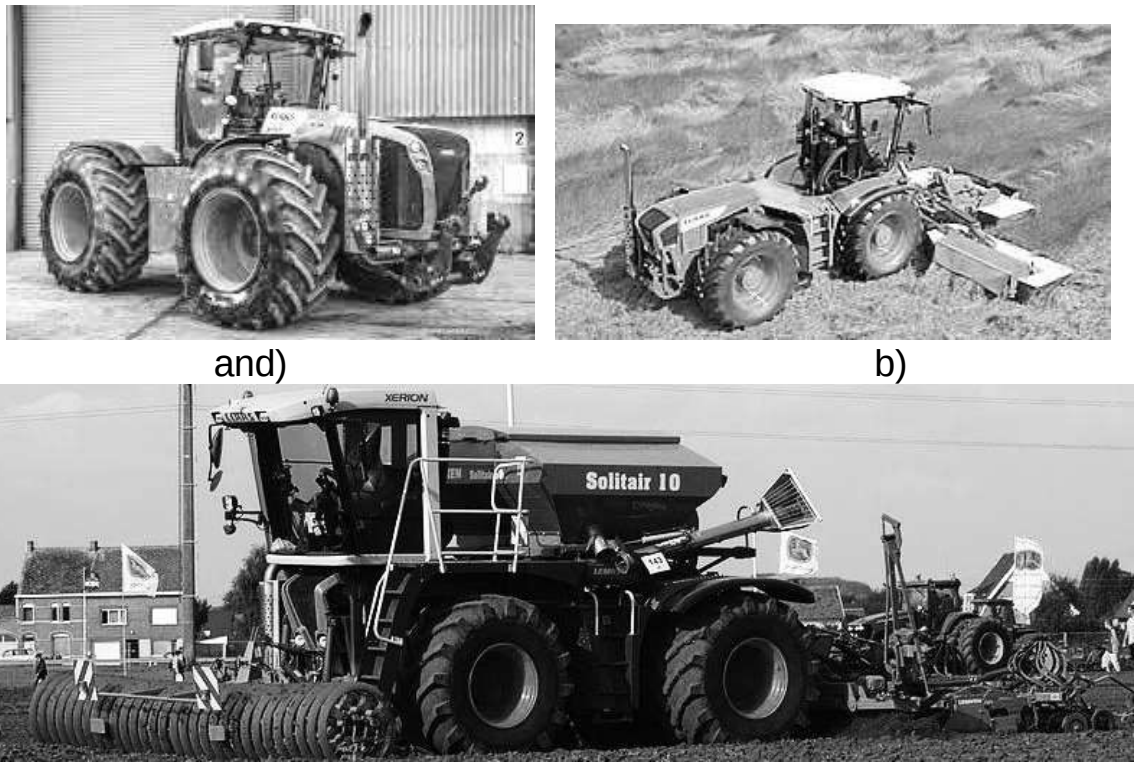
Uselast one tractor type HTZ-120 as part hruntoobrobno- sowing and other combined units was not easy, however, to resolve by improving hinged device specification
their regulations, the use of corrective devices [2, 3, 4]
evadesLo-constructive interference Layouts tractor.

Uselast one tractor type HTZ-120 as part of forager unit napivnachipnym combine "Polese- 3000" and grass header, in addition to significant congestion
bydnoho bridge (Fig. 3, a), it was difficult because of poor visibility of job header (Fig. 3, B). The latter problem can be solved constructively by changing the location of the office of management power means (moving to the back of
machines, provided the work on the reverse). This change in the location of assembly units power means connected with changes
(Correctbath) structurally Layouts latter.

Ric. 3. Type Tractor HTZ-120 as part of forager unit.

OnControl power means art that works on the reverse of the harvesting machine, according to research described in [6] should stand between the rear drive axle and header that will determine the main directions of adjustment structural and Layouts.

OnSimilarly adjustments at different times was conducted in Bima-300 power means and power means a company Claas Claas Xerion (Fig. 4).



and) b)

c)

Ric. 4. Options for the location of post control power means Claas Xerion: A - mizhbazove (center); b - back; in - front.

Onfurther improvement of integrated structural and Layouts moving towards a so-called

«symmetric "integrated layout that provided more fully circular visibility. In addition to this technical solution characterized by a significant expansion of the middle zone of free space to install the tools or technological capacities. This is achieved by moving the engine under the cab and release the site for installation of process equipment in front of the power means [5].

«Symmetric "integrated arrangement is more in line with the requirements of providing conditions aggregating tractor with machines and tools. An example of "symmetric" integrated
construktyvno-Layouts can serve enerhozasib Fendt-524 Xylon - Fig. 5 as well. However, even the implementation of "symmetric" integrated layout could not provide satisfactory visibility of zahrehatovanyh working machines, leading to
Reactivementation rolling office management even for the structural and Layouts (Fig. 5 b).

Wartho noted that the company Fendt example in implementing integrated layout is not quite correct reason that the firm long figured in the market as a manufacturer of power means classical design-layout scheme and self-propelled chassis. And
thnerhozasib Xylon Fendt-524 was positioned at the beginning rather than an option improve self-propelled chassis.

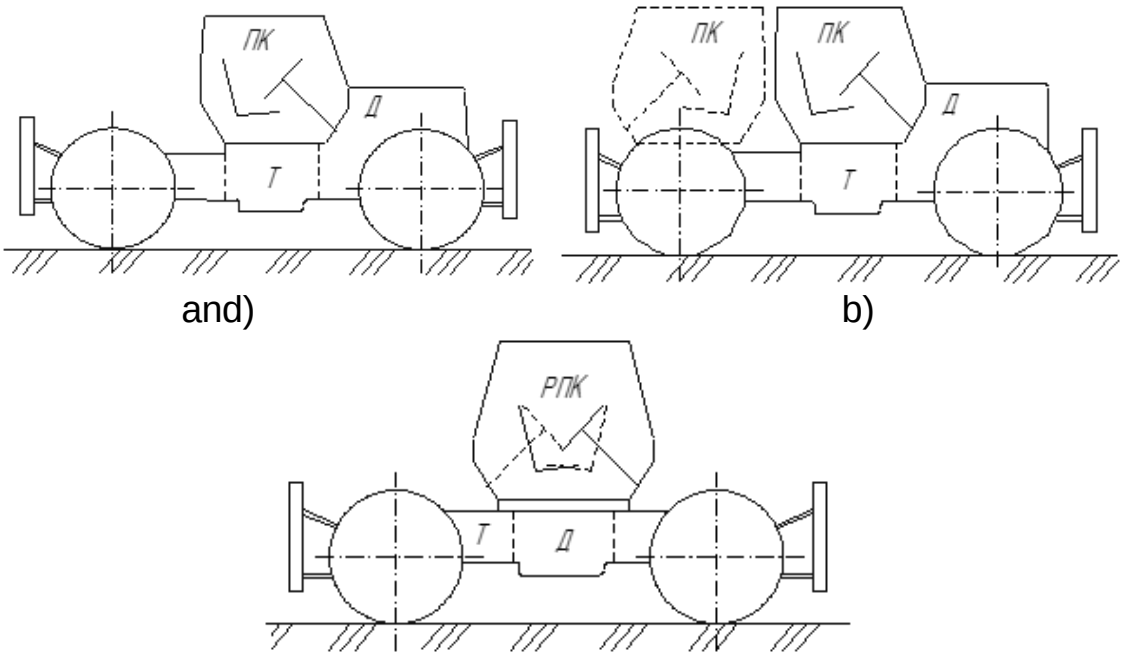
However, going back to the constructional features integrated Layouts and analyze them with respect to the said power means, one could argue that with the exception of paragraph which prescribes the presence wheels of equal size (Fendt-524 Xylon
rebottom with wheels smaller than the rear) this enerhozasib
has integrated layout similar to the type and power means HTZ-120.

and)

to)

Ric. 5. MEW "symmetric" integrated layout type Fendt-524 Xylon. and - general view; b - rear-post control.

In theB, the above power means a greater or lesser extent related to integrated with that can perform completely different number of process operations (provided the guaranteed support of technological modules) with different levels of quality. This phenomenon is taken into account when studying the levels of universality of these machines. According to the results of [7] found that 16 131 tractor HTZ-level characterized by versatility K_{UK} = 0.57, and for enerhozasibu Fendt-524 Xylon K_{UK} = 0.79. The maximum value of these indicators for integrated design-layout scheme based on modern technology development tractor and the agricultural production, provided the type of power means 16 131 HTZ- not exceed 0.82, and power means the type of Fendt-524 Xylon - 0,91. Under these conditions it is possible to identify the main directions of development of an integrated design-power means Layouts - Fig. 6. Further structural changes in the layout will not significantly increase power means universal, and therefore it is advisable to implement them in other structurally Layouts power means.



and) b)

c)

Ric. 6. Andntehralna design-layoutschemesand and priorytetni phaseand its Development. and - betweenBaseth (Thisntralne roztashuof office management) are not reversible control post without reversing transmission; b - resettable reversible post control; in - "symmetrical" layout with integrated reversing Adjustable not post control; D - engine; T - transmission; PC - onArticle Control PKK - reversing position control.

Stillm it is possible to argue that power means integrated layout, in accordance with the consumer, may in a wide range of characteristics change their consumer as to the achievement of universal design $\mathbf{Ku_{for}}$= 0,82-0,91 prand its maximum value equal to 1.0 by implementing schemes of the three options, namely: 1 - mizhbazove (central location management office) without reversing position control without reverse transmission, and all other signs shall comply with those set out in [5] (Fig. 6, a); 2 - resettable reversible control post, and all other signs shall comply with those set out in [5] (Fig. 6, b); 3 - "symmetrical" layout with integrated reversing not post adjustable control as seen signs set out in [5] (Fig. 6, c).

Conclusion. As a result of studies found
uo to ensure customer requirements integrated structural and Layouts power means it is advisable to implement compliance with its main features and differences, which are concentrated in three circuit design, namely: 1- mizhbazove (central location management office) is not reversible post control, not reversible transmission; 2 - resettable post reversible control; 3 - "symmetrical" layout with integrated reverse is not adjustable control post.

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AndResults analysis zlozhenы development yntehralnoy structurally komponovochnoy scheme эnerhosredstv selskoho-zyaystvennoho purpose.

Mobylnoe эnerhetycheskoe funds, layout, layout yntehralnoya, constructions, development.

The results of analysis of development of integrated design-layout scheme of power unit for agricultural purposes.

Mobile power, tool arrangement, integralnoya layout, design and development.

UDK
630.56.7

CriterionHer EVALUATION warping PARTS DURING HEAT TREATMENT

OE Semenov, Ph.D.

InstallationFor whatever reason warping of parts during heat treatment. Criteria of evaluation of this magnitude.

Steel, doping, cementation, technology, warping, internal pressure.

Resolutionska problem. Suchasleep makes equipment to construction materials increasingly high requirements for mechanical properties and serial and mass engineering with regard to their adaptability. Skladnoprofilnist modern details gears requires inclusion in the process of manufacturing operations forming, machining, welding, surface hardening, finishing honing operations. This places the material increasingly high technological requirements shtampuvalnosti, machinability, weldability, prohartovuvannosti, tsementuyemosti, warping during hardening.

AnaLease Finalnnih dossurvey findings. In the EQUIPMENTsti thismentuvalnyh selection of steel compositions with optimal physical-mechanical and technological capabilities complicated