

OPERATIONAL ASSETS OF ENTERPRISE

1. COMPOSITION, STRUCTURE
AND CLASSIFICATION OF OA

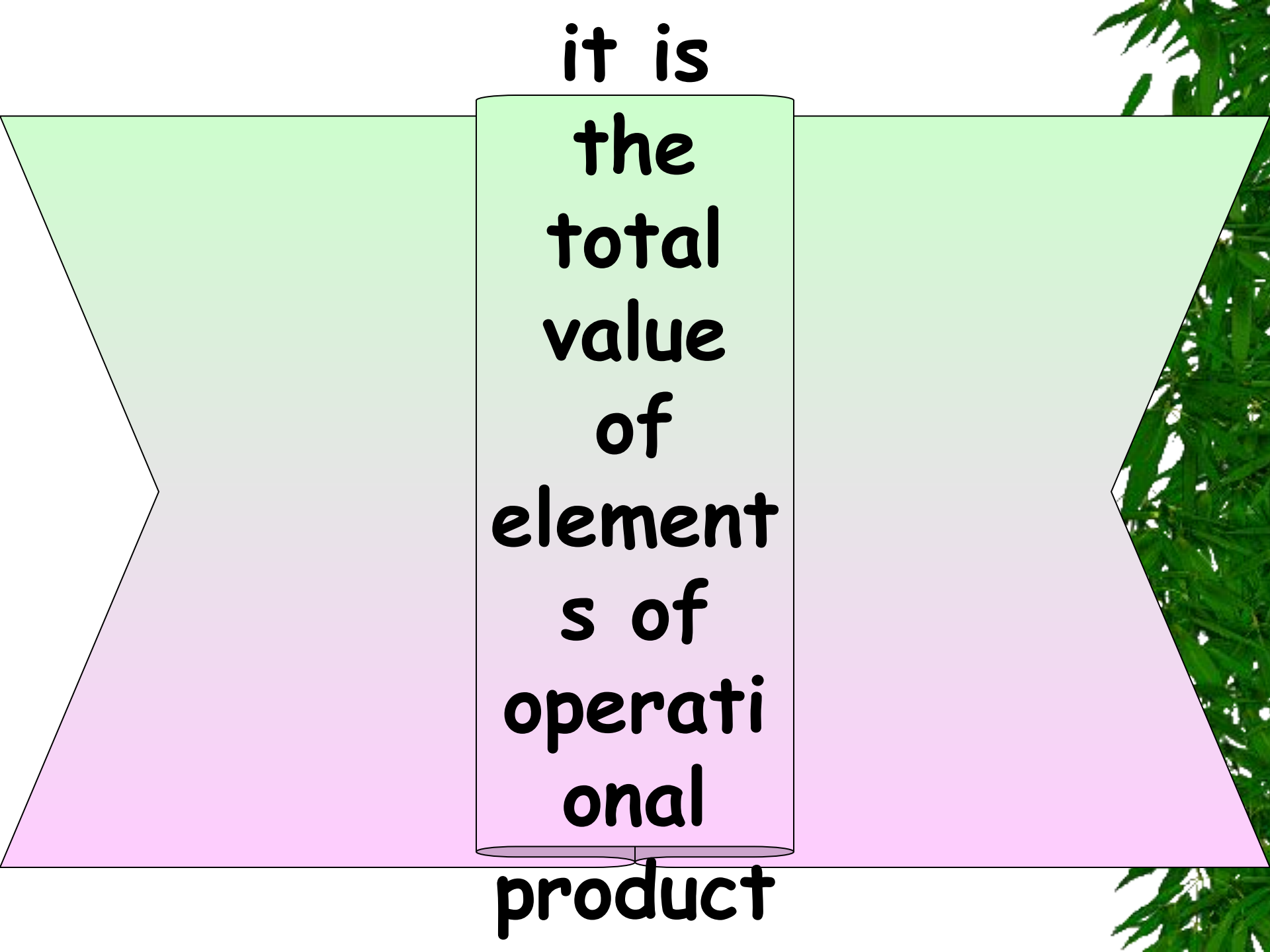
2. DETERMINATION OF
NECESSITY

IN OPERATIONAL ASSETS

3. ESTIMATION OF THE
EFFICIENCY

OF USAGE OF
OPERATIONAL ASSETS

operational assets -
it is the sum of money,
that was advanced for creation
operational production assets
and funds of circulation, which provide
continuous rotation of
money.



it is
the
total
value
of
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s of
operati
onal
product

Structure of operational assets -
it is the specific proportion of
operational production assets and
funds of circulation in total value
of operational assets

(in economics of Ukraine structure of operational
assets usually divide into: commodity material values
- 21,6%, credits for customers - 69,5%, money - 3,9,
current financial investments - 1,7.)

Operational assets

Operational production assets

Funds of circulation

Merchandise in production
supplies
Materials in production process
Expenditures of future periods

Goods available for sale
Goods sold in a way to customer
Money
Customers credit

Fixed operational assets
(working capital and ready products)

Operational production assets (working capital)-

it is the **objects of labor** (raw material, basic materials and half-finished products, auxiliary materials, fuel, package materials, spare parts, etc.);

means of labor with the term of service less than one year (low value and quickly used objects and instruments); uncompleted production and charges of future periods.

enterprise
invested in

the
supplies of
ready
products,
commoditi
es what are
shipped
but unpaid,
and also

money in
transfer in



STAGE OF MONEY



STAGE OF PRODUCT



STAGE OF PRODUCTION

CLASSIFICATION OF OPERATIONAL ASSETS



1. BY THE ECONOMIC MEANING:
operational production assets
and funds of circulation

2. BY THE METHOD OF FORMING:
OWN
BORROWED

3. BY THE METHOD OF PLANNING:
FIXED
UNRATIONED

Methods of value estimation of supplies



by every item cost price;

by average cost price;

Method FIFO (first in – first out);

Method LIFO (last in – first out)



The process of setting the norms of operational assets of enterprise is a calculation of optimum size of operational assets, necessary for organization and running normal economic activity of enterprise.


Normative of operational assets —

it is the minimum value of operational assets which is enough for continuous run of the production process.

Hoc –norm of operational assets, days
M- value of material resources for the period, hrv
T - period

$$W_n = Hoc * \frac{M}{T}$$

Target of the
process of
setting the
norms



*Determination of rational
size of operational assets
which are distracted on a
certain term in the sphere
of production and sphere
of circulation*

PRINCIPLES OF PLANNING



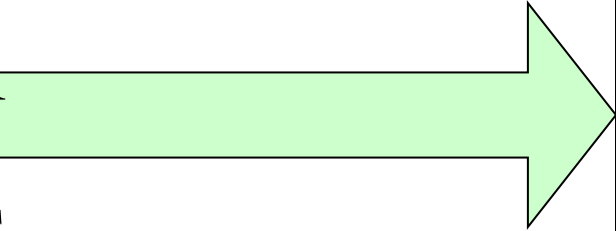
1. PRINCIPLE OF DETERMINATION
2. PRINCIPLE OF SYSTEM WORK
3. PRINCIPLE OF SCIENTIFIC CHARACTER
4. PRINCIPLE OF VALIDATION
5. PRINCIPLE OF PROGRESS CHARACTER

Terms of establishment of norms on operational assets



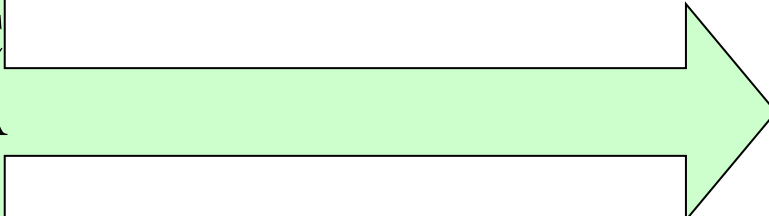
1. Terms of delivery and sale
2. Distance between the supplier and the consumer
3. Transport terms
4. Time for the preparation of materials for the use in the production process
5. Periods of putting raw materials in production
6. Duration of production cycle
7. Forms of accounting, duration of document circulation

Methods of determination of necessity in operational assets



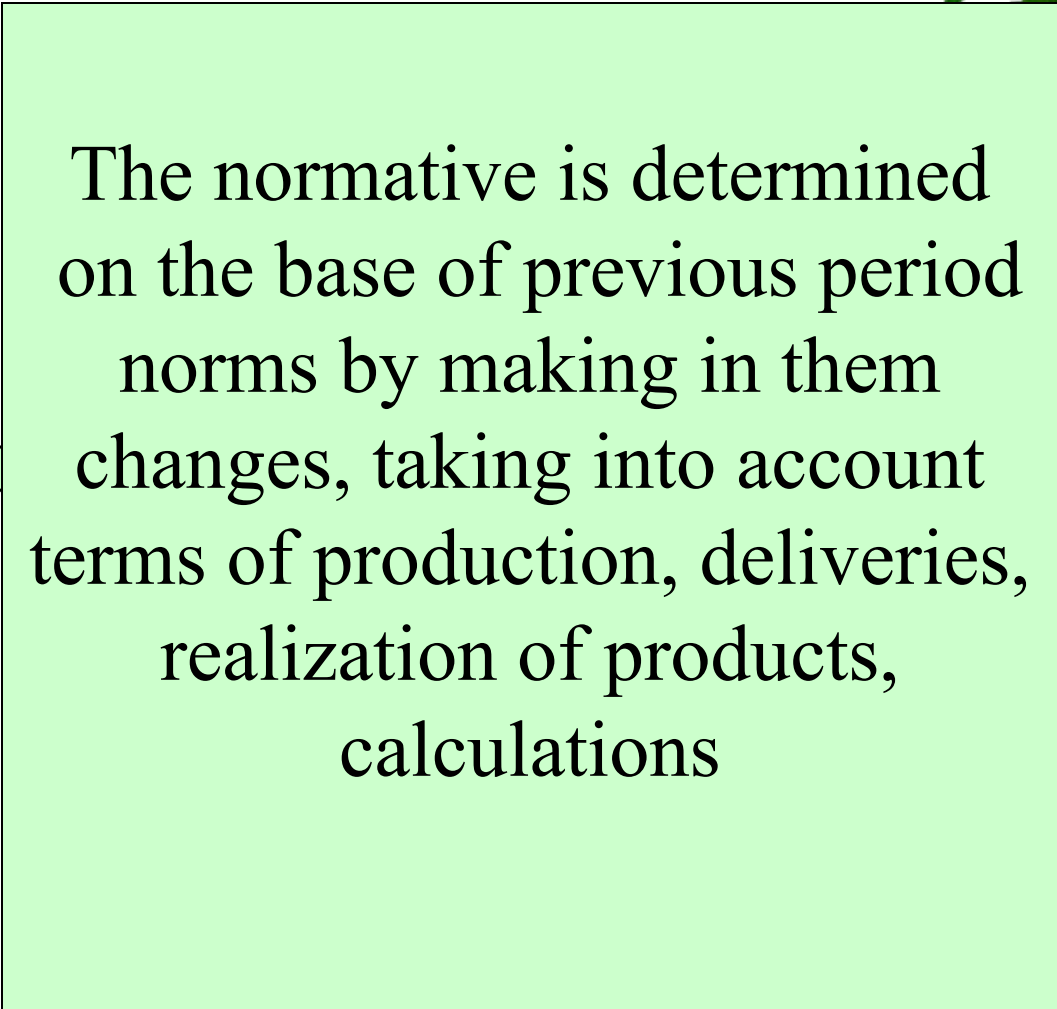
Based on the calculation of norms on each of the rationed element of the operational assets.
Enables more precisely rationing of the operational assets usage, taking into account the specific of enterprise development

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Used in those cases
when in planned
period it is not foreseen
substantial changes
in the activity of enterprise.
A normative is determined
by comparison between
the rates of growth
productions and
the size of rationed
operational assets

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The normative is determined on the base of previous period norms by making in them changes, taking into account terms of production, deliveries, realization of products, calculations

Norm of supply of operational assets - it is the minimum necessary amount of days, for which specific amount of supplies is needed to provide the normal functioning of enterprise.

Norm of supply of operational assets (OA)

1. Normative of OA
in production supplies

2. Normative of OA
in uncompleted production

3. Normative of OA
in remains of ready products

4. Normative of OA
in charges of future periods

Insurance supply

Transport stock

Technological stock

Normative of production supplies

Current stock

Preparation stock



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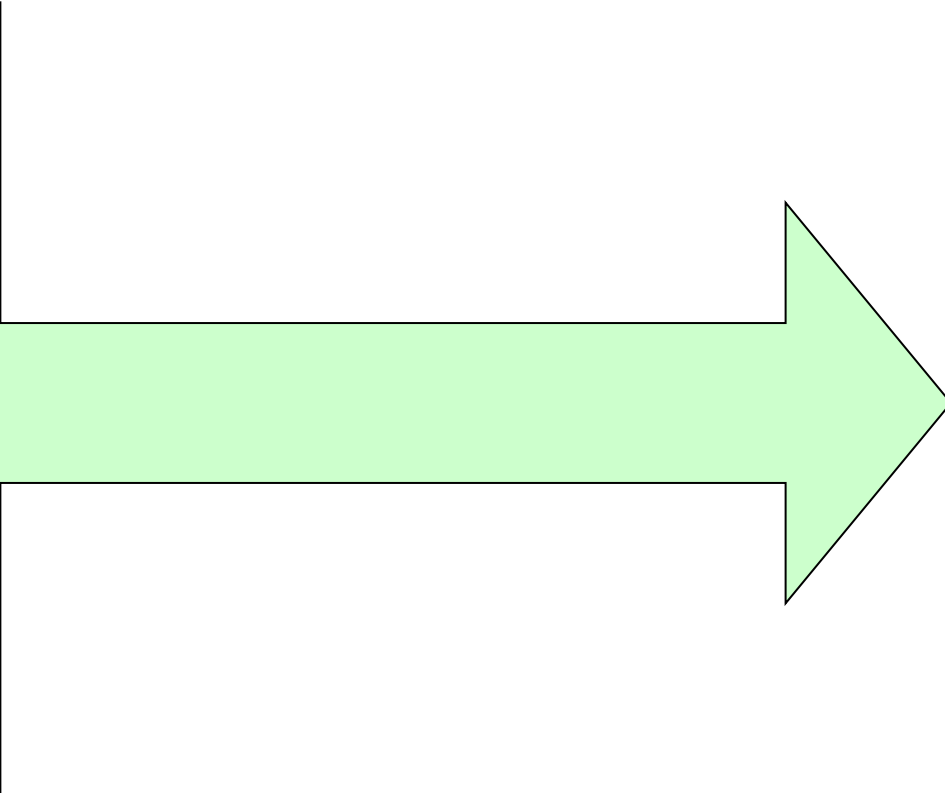

$$\mathbf{Зтек = Д * Тпост}$$

Д – daily necessity
for supplies;

Тпост – period of
delivery of the
material resource in days

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Determined as
a requirement in the
resources
on the period of
derangement
deliveries ($T_{\text{ср пост}}$)
 $Z_{\text{страх}} = D * T_{\text{ср}}$
пост

A transport stock is created in case of the exceeding of terms of transport cycle as compared to terms of circulation of documents on the enterprise, sent from suppliers on considerable distances

Technological stock created in cases, when the type of particular raw material needs previous treatment

Preparation stock created because of the necessity of reception, unloading, sorting and warehousing production supplies.

The norms of time are set by a time-study

Maximum stock size (Z_{max}):

$$Z_{max} = Z_{min} + Z_{nom}$$

Average stock

$$Z_{cp} = Z_{min} + 0.5 * Z_{nom}$$

Normative of production supplies (Нпр.з)

$$\text{Нпр.з.} = \text{Д} * \text{Здн}$$

Daily necessity, items.

$$\text{Д} = \text{Mo} / 360$$

Mo – overall necessity in particular type of resources, items

$$\text{Mo} = \sum_{i=1}^m Ni * q_i$$

$$q_i = \frac{Mi}{K_{вм}}$$

Ni- number of products

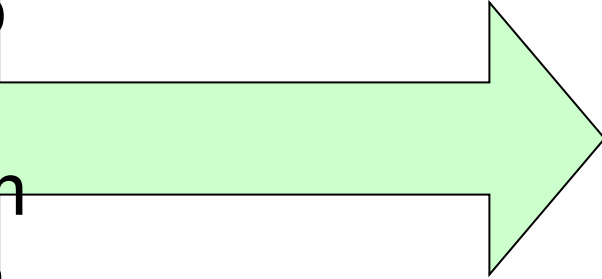
q – weight of one base item

Mi – net weight of one item

K_{вм} – coefficient of the use of metal



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$$H_{\text{незав.}} = \frac{C_p * T_{\text{ц}} * K_{\text{нз}}}{360}$$

C_p – cost price of annual volume of production

$T_{\text{ц}}$ – duration of production cycle

$K_{\text{нз}}$ – coefficient of increasing of cost, which shows the degree of completing of the product

$$K_{\text{нз}} = \frac{M + 0,5C_1}{C_1} = \frac{C_0 + 0,5C_n}{C_0 + C_n}$$

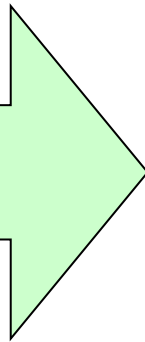
M – sum of material expenditures on production of one item

C_1 - cost price of one item without material expenditures

C_0 - one-time expenditures at the moment of the starting of production

C_n – current expenditures on production

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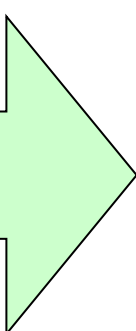
$$H_{гп} = Пс * Здн$$

Пс – value of daily production volume by production cost

Здн – norm of stock in days

The norm of supply consists of amount of days which are needed for preparation of products to realization (acquisition, packing, shipping users et cetera)

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Calculates with taking into account the remains of money on beginning of period and sum of charges which must be carried out in the planned period after deduction of the sum for future redemption of charges due to an unit cost

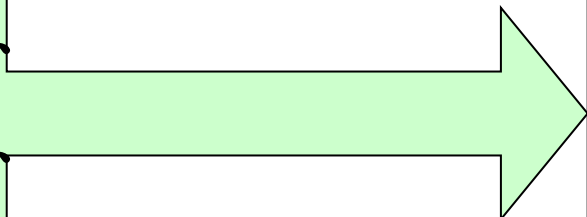
$$H_{\text{МП}} = C_{\text{Н}} + З_{\text{ПЛ}} - З_{\text{ПОГ}}$$

$C_{\text{Н}}$ – remains of money on beginning of period

$З_{\text{ПЛ}}$ – charges which must be carried out in the planned period

$З_{\text{ПОГ}}$ - sum for future redemption of charges due to an unit cost

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it is their functioning during which is provided the stable state of financial resources and the most high results of activity at the minimum charges of enterprise

Circulation of operational assets is the duration of complete circulation of facilities from the moment of acquisition of operational assets (purchase of raw material, materials etc) to the output and realization of the ready products.

Indicators of circulation of operational assets

Indicator of circulation

shows

How many turns can do operating assets for certain period of time

Calculated as

$$K_{об} = \frac{P\Pi}{O_c}$$

$P\Pi$ - annual sold products

O_c – average remains of operating assets per year

Coefficient of load

shows

How many operational assets of enterprise are on the 1 grivna of the sold products

Calculated as

$$K_3 = \frac{Oc}{P\Pi}$$

Duration of one turn

shows

Duration of one turn of operational assets in
days

Calculated as

$$T_{об} = \frac{360}{K_{об}}$$

Average remains of operating assets per
year (O_c)

$$\bar{O} = \frac{\frac{O_1}{2} + O_2 + \dots + \frac{O_n}{2}}{n - 1}$$

O_1, O_2, O_{12} – average remains of operating assets per
month

Acceleration of circulation of operational assets

An increase of volume of produced products on every hryvna of current expenditures of enterprise

Enables to free part of assets and use them to create additional reserves for expansion of production

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$$\Delta \bar{O} = \frac{P\Pi_0}{360} * (T_6 - T_3)$$

$P\Pi_0$ - volume of produced and sold products in the actual period

T_6, T_3 – average duration of one turn of operational assets in basic and actual period

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$$\Delta O = \frac{\overline{O}_6}{P\Pi_6} * P\Pi_3 - \overline{O}_3$$

O_3, O_6 – average remains of operational assets in actual and basic period

$P\Pi_3, P\Pi_6$ – volume of sold products in actual and basic year

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$$\Delta\Pi = \Pi_{\bar{6}} * \frac{P\Pi_3}{P\Pi_{\bar{6}}} * \frac{O_{\bar{6}}}{O_3} - \Pi_3$$

$\Pi_3, \Pi_{\bar{6}}$ – an income from sold products in actual and basic period respectively

$O_3, O_{\bar{6}}$ – average remains of operational assets in actual and basic period

$P\Pi_3, P\Pi_{\bar{6}}$ – volume of sold products in actual and basic year

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$$\Delta R = \frac{\Pi_1}{O\Phi + O - \Delta O} \times 100 - R_1, \%$$

ΔR - a change of level of general profitability due to the change of remains of the fixed operational assets


Π_1 - balance income in actual year

$O\Phi$ - average annual cost of capital production assets

R_1 - general profitability of production in actual year, %

Increase of efficiency of operational assets use
could be achieved due to such measures:

- ▶ diminishing of terms of products making as the result of mechanizations of works, improvement of technological processes;
- ▶ diminishing the normative of production supplies by the improvement of organization of material and technical deliveries by diminishing of their transporting distance

- 
- ▶ economy of financial resources, better storage and account, severe observance of norms of expenditures of materials per one unit
 - ▶ improvement of calculations with customers and introduction other methods on an improvement financial and payment discipline
 - ▶ arrangement of pricing, application of functioning system of economic stimulation.

Exercise

- * In a actual year the amount of the fixed operational assets on the enterprise made 460 thousand of hrv. Duration of one turn of operational assets – 56 days. Next (planned) year the volume of the sold products will be increased on 27 %. Define, on how many days time of one turn will be less at the unchangeable size of the fixed operational assets.



- * У звітному році сума нормованих оборотних засобів на підприємстві склала 460 тис. грн. Тривалість одного обороту оборотних засобів - 56 днів. В наступному році обсяг реалізованої продукції збільшиться на 27 %. Визначити, на скільки днів скоротиться час одного обороту при тій же величині нормованих оборотних коштів.



Розв'язання

Тривалість одного обороту визначається за формулою: $T_{об} = Д/К_{об} = О_{ср} * 360(365) / РП$

* $РП_0 = О_{ср_0} * 365 / T_{об_0} = 460 * 365 / 56 = 2998,2$ тис.грн.

* $РП_1 = 2998,2 * 1,27 = 3807,7$ тис.грн.

* $T_{об_1} = 460 * 365 / 3807,7 = 44,09$ днів

Час скорочення одного обороту = $44,09 - 56 = 11,91$ дні

