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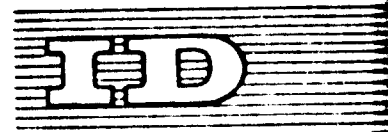
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DETERMINATION AND CONTROL OF PRODUCTION
COSTS IN PUBLIC MANUFACTURING ENTERPRISES ^{1/}

by

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Determination and Control of Production Costs in Public Manufacturing Enterprises

INTRODUCTION

(a) The Determination of Production Costs

Production costs in any industrial enterprise can be determined in two aspects :

- a. retrospective one, ex post, in the system of cost accounting,
- b. prospective one, ex ante, in the system of cost planning.

Both aspects of costs determination are very important for any system of control of production costs. Each control consists of comparison of the factual state of some economic process with its desired postulated state and in determination of causes of differences among them; on this basis, necessary measures are chosen and applied in order to attain the postulated state of the process in question.

Comparison of production costs of the same commodities or services produced in the same enterprise in two different periods of time, for instance in two consecutive years, is the simplest system of their control. However, simple observation of differences between production costs in different periods of time, has a very limited efficiency. The very reason of determination and control of production costs is improvement or economization of productive processes in industrial enterprises. This requires minute examination of production costs incurred, determination of all important factors affecting their level and choice of measures to be applied in order to diminish this level. By analyzing production costs incurred and projecting different measures aiming to improve economic efficiency of production processes, and choosing among alternative measures, unavoidably some account of the estimated efficiency of these measures must be made, which results in determining estimated or planned production costs for future periods.

(b) The System of Determination and Control

Therefore in the system of determination and control of production costs in most cases three different levels of these costs appear :

- a. Factual production costs incurred
- b. Planned or postulated costs for the current period of time
- c. Factual production costs in the current period

All three levels of production costs ought to be compared and analyzed, and therefore determination of costs in all these aspects ought to be based on the same principles. These principles are defined by targets of determination and control of production costs and by specific conditions of each enterprise : the size and structure of its production, technology and techniques applied, organizational system, skill and experience of staff employed etc.

The most direct and important target of determination and control of production costs is to deliver information for decision-making at different levels of management. This information has to determine material and personal factors affecting production costs : economic efficiency of different materials used in production, of different technological processes applied, of personal ability and responsibility of single workers and their groups employed in processes of production, of the efficiency of the organizational system etc. In this sense the system of determination and control of production costs, supplying information for decision-making, is an instrument of internal management of industrial enterprises.

In the public sector, industrial enterprises usually are not completely independent in their decisions, being subordinated to some external authorities as, for instance, in the case of Poland, Boards of Unions of Enterprises, uniting all enterprises of the same industrial branch. These authorities investigate production costs of separate enterprises, make comparative studies of costs of production of separate commodities produced by different factories, etc. in search of information for decision-making at the level of the industrial branch and even on the level of the whole national economy, concerning for instance, specialization of some enterprises in production of determined commodities, localization of new investments, etc. Results of such studies depend to a great extent on comparability of information, delivered by different enterprises. That is why upper-level economic organizations impose upon subordinated enterprises standardized systems of determination of production costs, preserving comparability of data, supplied by all enterprises. The standardization of systems of determination of production costs is always advisable, also in cases when it is not imposed by administrative measures, because it enables each enterprise to profit from the experience of other enterprises of the same industrial branch in improving economic efficiency of production. Some general principles of costs planning and accounting can be standardized not only within separate branches of the national economy, but also within the whole industry belonging to the public sector.

FUNDAMENTAL PROBLEMS

Common principles of determination and control of production costs, obligatory for all public industrial enterprises or only for enterprises of the same industrial branch and preserving comparability of information delivered by these enterprises are very general ones. In each separate enterprise they ought to be detailed and adapted to its specific conditions, resulting from its size, organization etc. When establishing the system of determination of production costs in planning for future periods as well as in accounting for past periods, the following fundamental problems must be solved :

(a) The choice of calculation units:

A calculation unit is a measurement unit of product usually expressed in physical units - pieces, meters, kilograms, etc. which is to be the object of calculation of unitary costs of production.

From the point of view of the calculation procedure there are distinguished principal calculation units - elements of basic production of the enterprise - and auxiliary calculation units - products or services produced for the internal use by auxiliary departments of the enterprise. For instance, in an engineering factory, different kinds of machines produced can be considered as principal calculation units. However, units of electric power, produced by an electric generation unit stationed at the plant site, and used in different departments of the factory, should be determined as auxiliary calculation units.

Among principal calculation units there are sometimes distinguished final ones, final products for sale, and transitional ones, half finished products, elements for assembly etc.

Principal calculation units can be determined in a detailed way as physical units of each separate kind of product, or in an aggregated way, as physical or conventional units of groups of similar products. For example, in an engineering factory, all kinds of engines produced can be considered as separate principal calculation units, measured by pieces, or similar engines can be grouped in one aggregated item, measured in horse-power units.

In Polish practice, for the sake of comparability of costs of production in all enterprises of the same industrial branch, principal calculation units are determined in a standardized way by boards of unions of industrial enterprises. Aggregated calculation units are here applied to a great extent. For instance in

the Polish steel and iron industry, castings produced by foundries are calculated in groups determined by their weight, 0 to 5 kgs, 5 to 25 kgs, 25 to 50 kgs etc. At the same time enterprises are authorized to calculate some principal kinds of castings separately for their internal purposes, provided that calculations presented to the union of enterprises are again aggregated. So, for instance, foundries supplying motor car factories with engine casings determine them as separate calculation units.

When organizing the system of determination of production costs, especially in developing countries, it is advisable not to determine too many principal calculation units. Excessive detailization of calculation entails exorbitant extension of documentation and costs accounting, complicates transformation of data with an increasing risk of mistakes. Therefore it is advisable to limit individual calculation of unitary costs of production only to principal products, representing a cardinal part of the global production, grouping other products in aggregated units.

Calculation units, once chosen for costs determination in a certain industrial branch or enterprise, should not be changed too often. Comparability of costs depends to a great extent on preservation of the same principles of their grouping. Naturally, according to changes of the structure of production, new calculation units must be introduced when some old ones disappear. Such partial changes of calculation units do not affect comparability of production costs of the same products, but a general change of calculation units connected, for instance, with a change of criteria applied in grouping similar products in aggregated calculation units usually makes unitary costs not comparable and deprives them of value for analytical purposes.

(b) The choice of the system of classification of costs

Costs attached to separate calculation units in the form of their unitary costs are the final result of the complicated procedure of calculation. The first stage of this procedure is classification and grouping of costs according to established criteria.

Costs first appear as outlays, determined in their kind and amount, as for instance the value of materials put into production, wages and salaries paid, contributions transferred to the social insurance system, etc. In many systems of accountancy, costs are first classified "by kind" and recorded, according to their nature, on separate accounts for each of them.

In Polish industrial enterprises of all branches, a standardized system of classification of costs by kind is applied, containing the following items :

1. wages and salaries
2. contributions to the social insurance system
3. depreciation, amortization of fixed funds and fixed capital
4. materials used
5. energy
6. costs of productive services supplied by other enterprises
7. transportation
8. repairs
9. other costs of material character
10. costs of not material character, for instance interests on bank credits, local taxes and fees etc.

This system is sometimes considered as too far detailed and suggestions are made as to its simplification, especially in small enterprises. Such suggestions could be interesting also for developing countries. For instance, E. Terebucha¹ proposes a system of classification, containing only the four following items:

1. materials used
2. depreciation of the fixed capital
3. wages, salaries and contributions to the social insurance fund
4. other outlays.

In order to organize the system of determination and control of production costs for industrial enterprises, it seems advisable to start with simplified costs classification. With the increasing experience of the administrative staff, simplified systems can be developed into more detailed ones, according to growing needs of more detailed information on the structure of costs.

Classification of costs by kind is only the starting point for analytical transformation of recorded or planned outlays. The first stage of this transformation consists of a division of costs into two groups: costs connected with productive activity of the enterprise and costs connected with its not productive activity. In many countries industrial enterprises - especially public ones - besides their basic productive activity, exercise some social functions for their workers and employees, constructing and administering dwelling houses, hospitals and

¹ Rachunkowość kosztów przedsiębiorstw przemysłowych/Costs accounting in Industrial Enterprises, Warsaw 1967, page 99.

out-patients departments, rest houses etc. Costs connected with social services and other kinds of not productive activity ought to be separated from production costs.

In further considerations we shall deal exclusively with production costs, leaving apart costs of not productive activities. Having in mind, that the final result of transformation of costs is to be determination of unitary costs of separate calculation units, we must divide all productive costs in the second stage of transformation into two groups : direct ones and indirect ones. Direct costs are those which can be directly attached to separate calculation units. In the Polish manufacturing industry the following costs are considered as direct ones:

1. Direct materials
 - a. raw materials
 - b. other basic materials
 - c. auxiliary materials
 - d. wrappings
 - e. fuel and energy of technological character
2. Direct wages, together with contributions to the social insurance fund
3. Other direct costs
 - a. special equipment and tools
 - b. patterns, licences, models
 - c. productive services supplied by other enterprises
 - d. other direct costs

The distinction of productive costs from not-productive costs in the first stage of transformation, and then the distinction of direct costs from indirect ones within the group of productive costs in the second stage of transformation, are based on the primary documentation of all outlays of the enterprise. Therefore, this documentation must contain all the necessary information for this purpose, indicating for instance, not only kind, quantity, price and value of materials used, but also the organization unit of the enterprise applying these materials, e.g. productive department, social service etc., destination, e.g. basic material for defined calculation unit or maintenance material for technical equipment, etc. In the same way payrolls as primary documents of outlays on wages and salaries must indicate organizational units of the enterprise, employing workers and employees. For determination of direct costs of wages, additional documentation is needed, containing information as to the number of working hours, rates per hour and total cost of labour used by production of each separately calculated unit of product.

In general, systems of costs transformation, calculation and costs documentation are strictly interrelated. Each more detailed system of calculation requires additional documents, additional work connected with their preparation, testing, recording etc. It is one reason more for beginning with simplified systems of determination and control of production costs, especially in conditions in which skilled administrative staff is scarce and no experience in this field is yet accumulated.

In Polish practice, separate industrial enterprises, according to their need in more detailed control of production costs, are entitled to detailed direct costs within items, quoted above. For instance, in Polish steel mills direct costs of materials used are recorded in 25 separate items, which enables them to control costs of production in a very detailed way. It is however necessary to underline, that in these factories, accountancy and calculation of costs are fully mechanized.

Indirect costs of production are those, which can not be directly attached to separate products, as for instance depreciation of technical equipment employed by production of different products, materials and labour used by maintenance and repairs of this equipment etc. Indirect costs are not grouped by products, but by places of their generation. This expression usually denotes organizational units of the enterprise, which activity caused outlays, considered as indirect costs of production.

For the generation of indirect costs of production, all departments of principal production are distinguished separately, according to the technological, organizational and territorial structure of the enterprise. For instance, in a factory producing agricultural equipment in Grudziadz, Poland, which is a medium-size industrial enterprise, there are five principal productive departments distinguished as separate places of costs generation, namely, foundry, forge, mechanic, carpentry and assembly departments. In more detailed systems of costs determination, applied by big enterprises, productive departments may be divided into several separate places of costs generation. For instance, in Metallurgic Works in Cracow, a very big and modern factory, producing 5 million tons of steel and steel products yearly, indirect costs of the steel mill department are subdivided by sections, Marten ovens, electric ovens, etc. and within sections by workstands, e.g. Marten ovens of 100, 300 and 500 tons capacity, considered as separate places of costs generation.

Determination of places of generation of indirect costs in productive departments should be made according to the technological, organizational and territorial structure of the enterprise and it should be connected with the responsibility of managers of distinguished departments, sections or workshops not only for technical running, but also for costs of the subordinated unit. Where there is no determined responsibility of defined persons, detailed accounting of indirect costs by indication of places would be useless. In smaller enterprises and even in bigger ones, which only start to operate a system of costs determination and control it can be the case of many industrial enterprises in developing countries. It is advisable to begin with simplified classification of places of generation of indirect costs, even up to recording all indirect costs of production on one aggregated account. The detailization of this account could be then proceeded step by step, together with perfection of documentation and organizational level of the enterprise.

In developed systems of determination of production costs, separate places of generation of indirect costs are considered not only productive departments of the enterprise, but also auxiliary ones. Auxiliary departments are defined as departments of auxiliary production, for instance, a power generation unit stationed at the plant site, and other auxiliary services, transportation, purchase and sales departments etc.

Determination of these places of generation of indirect costs depends again on the size and organizational structure of the enterprise. For instance, in such a huge enterprise as the Metallurgic Works in Cracow, there are the following aggregated places of generation of indirect costs of production:

1. Energetic department, sections of electricity, water, compressed air and gas supplying services.
2. Transportation department, sections of internal railways, automobile transport and other means of transportation.
3. Repairs department.
4. Patterns and tools department.
5. Purchase department.
6. Sales department.
7. Magazines.

It must be once more underlined, that in each case, determination of places of generation of indirect costs in auxiliary departments must be connected with determined responsibility of persons for the management of each service. In addition, the adequate documentation of costs must be organized in such a way that each item of outlays can be attached to defined organizational units of the enterprise.

The third stage of transformation of costs of production is the calculation of unitary costs of already determined calculation units. For this purpose the next problem of determination and control of production costs must be solved, namely:

(c) The choice of the system of calculation

The system of calculation - when direct costs of production of separate calculation units are already defined - determines methods of division of indirect costs among these units, in order to establish their final unitary costs.

Principal calculation units, single final products or their groups in aggregated units, can be subjected to calculation of unitary costs in quantities determined by the period of time of their production, or by the order of the buyer. In the first case calculation of unitary costs of defined products comprises their quantities, produced within a determined period of time, in most cases monthly; in the second case it comprises quantities, separately ordered by buyers, independently of the period of production. The first system is usually applied by enterprises, producing big quantities of standardized products. The second system is applied when buyers demand from the producer some special outfit of ordered products, or when short series of individualized products are produced.

It is necessary to underline, that the choice of monthly quantities of production, or quantities ordered by buyers, or quantities contained in series as subjects for calculation of unitary costs, affect first of all the method of grouping of direct costs of production, which in the first case are collected during the whole month on cards of products; in the second case on cards of orders or on cards of series, independently of the period of time of production. It does not affect the system of accounting indirect costs, which are always determined for defined periods of time, month, quarter of a year, etc. and then divided among calculation units according to established principles. In the system of calculation "by order", or by series, when in the current period of time some order or series was not completed, to already carried direct costs, an appropriate part of indirect costs is added, but the whole calculation is not finished. In the next period of time new direct and indirect

costs are added to cards of orders or series, until the whole order or series is completed and final unitary costs of produced goods, as the result of the division of the global cost by quantity of products contained in the order or series, can be determined. If the order or series was started and finished within the same month, the difference between calculation by monthly quantities and by ordered quantities appear only in the collection of direct costs.

The system of division of indirect costs among calculation units can be organized in different ways, according to the character of production and specific conditions of the enterprise in question. In the Polish manufacturing industry, the system is generally applied in which indirect costs, accumulated in groups, are added to separate items of direct costs of calculation units, according to "keys of division" established for each group of indirect costs. This system of calculation is executed in stages, in which first of all indirect costs, recorded by places of their generation, must be aggregated in the following groups :

1. costs of purchase and storage of materials
2. costs of running of principal productive departments by departments
3. general costs of management and administration
4. costs of sale.

Aggregation of indirect costs requires division of costs of all auxiliary departments and services among productive departments, general costs of management etc. To this purpose, auxiliary calculation units can be applied. For instance, when the transportation service is separated as an independent place of generation of indirect costs, its total costs ought to be divided among the purchase service and sale service. It can be done by determining a conventional unit of transportation services, for instance, one hour of employment of a truck or one tonokilo-meter tonnage, multiplied by distance of transported goods. Total costs of the transportation service are then divided by the global number of conventional units, determining the "unitary price" of the service. Then, according to the documentation of transportation services delivered to other departments or services of the enterprises, these departments are charged with costs of transportation. In this way, costs recorded on accounts of these departments increase, and costs of the transportation service as a separate place of generation of indirect costs disappear. In a similar way, costs of the energy station, considered as a separate place of generation of costs, can be divided among other departments, sometimes also among products; if necessary, measurement devices exist, using power units as auxiliary calculation units. All costs collected on the account

of the power station are then divided by the total number of power units produced, determining their unitary price, which serves to charge other departments with the costs of energy, according to the number of units used.

The system of auxiliary production units requires adequate documentation of services produced in auxiliary departments and of their supply to other departments. When such documentation does not exist, a more simplified method of aggregation of indirect costs may be applied. For instance, costs of the transportation department could be divided among the purchase service and the sales service according to the value of goods purchased and sold. Such division is not necessarily an accurate one, but it requires no special documentation and preserves at the same time recording indirect costs by places of their generation, and it is very important from the point of view of their control.

Indirect costs, aggregated in four groups, see above, are divided among principal calculation units, final products or their aggregated groups, according to determined keys of division.

Usually, as the key for division of costs of purchase and storage of materials is applied, their percentage relation to the total value of direct materials used in the period of time, for which calculation is made, according to the formula:

$$q_m = \frac{PSC \times 100}{VDM}$$

where q_m - key of the division, in percentage

PSC - aggregated purchase and storage costs

VDM - value of direct materials used.

The multiplying value of direct materials used in production of separate calculation units, the amount of indirect costs of purchase and storage to be added to its calculation of unitary costs is determined.

It must be mentioned, that the key for division of purchase and storage costs was determined in relation to the value of direct materials used, though these costs are caused by operations connected with purchase and storage of materials. Therefore, in periods when greater seasonal stocks of materials are accumulated and the difference between the value of direct materials purchased and the value of direct materials used gets some importance, the denominator of our formula must be increased by the value of new inventories accumulated. Consequently, costs of purchase and storage of materials do not add to the production, but the value of accumulated

stocks increases its average price. Finally, direct costs of materials will increase when the accumulated stocks will be used in production. The key for division of indirect costs of principal productive departments, running costs, is usually determined as the percentage relation of these costs to direct costs of wages and contribution to the social insurance fund. These keys are established for each productive department separately, according to the formula:

$$q_d = \frac{RC \times 100}{DL + SI}$$

where q_d - key for division of indirect costs of a productive department, running costs, in percentage.

RC - aggregated running costs of this department.

DL - total amount of direct costs of wages in this department.

SI - direct costs of contributions to the social insurance fund in this department.

By multiplying direct costs of wages and contribution to the social insurance fund of each calculation unit by this key, the amount of indirect running costs are determined and can be added to calculation of unitary costs of production of this calculation unit, final product or group of final products.

The key for division of general costs of management and administration is usually determined as the percentage relation of these costs to the total sum of all direct costs of production, i.e. costs of purchase and storage of materials and running costs of productive departments, according to the formula:

$$q_g = \frac{GC \times 100}{DC + PSC + RC}$$

with q_g - key for division of general costs of management

GC - total sum of general costs

DC - total sum of direct costs of production.

The other symbols were already defined above.

Again, in calculations of unitary costs of products or their groups, the amount of general costs to be added to each calculation is determined by multiplying this key by appropriate sums of direct and indirect costs.

Finally, the key for the division of costs of sale is usually determined as

the percentage relation of this group of indirect costs to the value of products sold evaluated at selling prices, according to the formula :

$$q_g = \frac{SC \times 100}{VSP}$$

with q_g - key for division of costs of sale

SC - costs of sale

VSP - value of products sold.

By adding, on calculation cards to direct costs, indirect costs of purchases and storage of materials, running costs of productive departments and general costs of management and administration, production costs of calculation units are determined. Production costs increased by costs of sale form full prime costs of sold products.

A simplified example of the calculation card, used in Polish engineering industries, is attached as supplement 1.

Basic principles of the system of determination of production costs, exposed above, are applicable as well for determination of factual costs of production, costs accountancy, as for determination of postulated costs of production, and cost planning. Naturally, in both cases, sources of information and methods of determination of costs are a little different. Factual costs are determined according to data supplied by documentation. Planned costs are determined on the basis of analysis of factual costs in past periods, then on the basis of different projected improvements of technical and organizational character in productive processes and other services of the enterprise and on the estimation of impact of these improvements on separate items of costs of production.

ORGANIZATIONAL QUESTIONS

The system of determination of costs of production organized on principles exposed above permits the organization of a comparatively efficient system of control of these costs. Outlays recorded by their kind, even in minute classification, are hardly submittable to any analytical control because of lack of determined connections between their amounts and productive activity of the enterprise. Only after regroupment of different items of costs according to their "bearers", i.e. products or groups of products for direct costs, pieces of generation for indirect costs, connections of causal character appear clearly. Therefore, control of costs of production ought to be made by their bearers,

beginning with direct costs of principal products.

(a) Control of direct costs

Direct costs of materials used for production of each separately calculated product ought to be examined by comparing quantities of materials used per unit of product with quantities planned or determined by technical standards. When planned quantities or standards do not exist, quantities of materials used in analyzed periods can be compared with quantities used in past periods. If some differences appear between factual and postulated past direct material outlays, their reasons should be determined as in the case of bad or better quality materials, changes in technology, increases or diminutions of defects caused by workers, etc. Also factual and planned prices of direct materials used ought to be compared and differences between them - if there are any - ought to be cleared up. Especially in cases when the quality of materials are changed, their prices should be carefully examined in order to establish whether prices of materials are proportional to their utility in production and whether their substitution was justified by final diminution of costs of production or by the increased selling price of products made of better materials. Control of direct costs of wages consists of comparison of factual and postulated, or standard, or past quantities of work time used per unit of product, globally or in separate technological operations, according to utilization of it, of unitary rates per hour and of total cost of wages. All differences occurring between these data should be examined and their causes - if possible - should be determined. Quantities of work time per unit of product, expressing labour productivity, in most cases depend on the skill of workers, on the organization of productive processes, adequate supply of materials and energy to each workshop, constant readiness of machine tools for technical operations, transportation of products from one working post to another, etc., on quality of materials and half-finished products applied in production, etc. Determination of impact of these factors on labour productivity sometimes cannot be made on the basis of normal documentation only and require special investigations on working posts. However, in enterprises applying the standard costs accounting system, normal calculation cards of products are recorded. At the same time, standard and factual quantities of work time for each operation, and all deflections from standard are currently recorded on special documents, with detailed explanations of their reasons. In the same way, in the system of standard cost accounting, factual and standard direct costs of materials used are recorded

with current explanation of all differences. That is why the system of standard cost accounting allows the control production costs to be done deeply and efficiently, rather than the traditional systems, in which costs are controlled on the time of their calculation, in most cases monthly.

All indirect costs should be controlled by items according to applied classification, which contains the same items, as the classification of costs by kind, at their places of generation. Control of costs consists here again in comparison of their planned level with the factual one. The planned level of indirect costs is usually determined by means of standards or norms, established for each kind of costs. For instance, costs of materials used in productive departments can be established with the norm of materials for conservation per one machine tool etc. Costs of wages and salaries are established with standards of employment of auxiliary workers and technicians controlling productive processes, and with standards of their unitary wages or salaries, etc. When controlling indirect costs all these standards, or - when such standards do not exist - factors of costs in past periods of time have to be compared with factual expenditures, and managers of organizational units considered as separate places of generation of indirect costs, ought to explain all the differences noted.

(b) Control of indirect costs

For needs of internal management of an industrial enterprise, control of direct costs by products, if necessary, limited to most important products and control of indirect cost by places of their generation, is the most important, because its results can be directly used for decisions, aiming to improve economic efficiency of production. Unitary costs of production of individual products or of their groups, according to applied systems of calculation units, are of limited use in the operational control of production costs. They are applied mainly in different estimations of rentability of production and in comparative studies of costs in different enterprises.

CONCLUSION

It is hard to estimate economic efficiency of systems of determination and control of production costs separately from other measures of management of industrial enterprises. As it was stated at the beginning of this paper, determination and control of costs supply only information for decision-making by the management, and therefore they have in themselves no direct effect on economic

efficiency and rentability of the enterprise. On the other hand, decisions are made without appropriate information and their analyses are hardly to be expected to be the right ones. Determination and control of production costs discovers weak points in organization and technology of the enterprise, permits the estimation of economic effects of different possible improvements, but all this information remains useless without adequate decisions and their consequent implementation. Both sides of the process of management, collection and transformation of information on one side, and decision-making and its implementation on the other side, are strictly interrelated, and their effects can be measured only in conjunction.



CALCULATION CARD No. ...

Order No. ...

Date of beginning

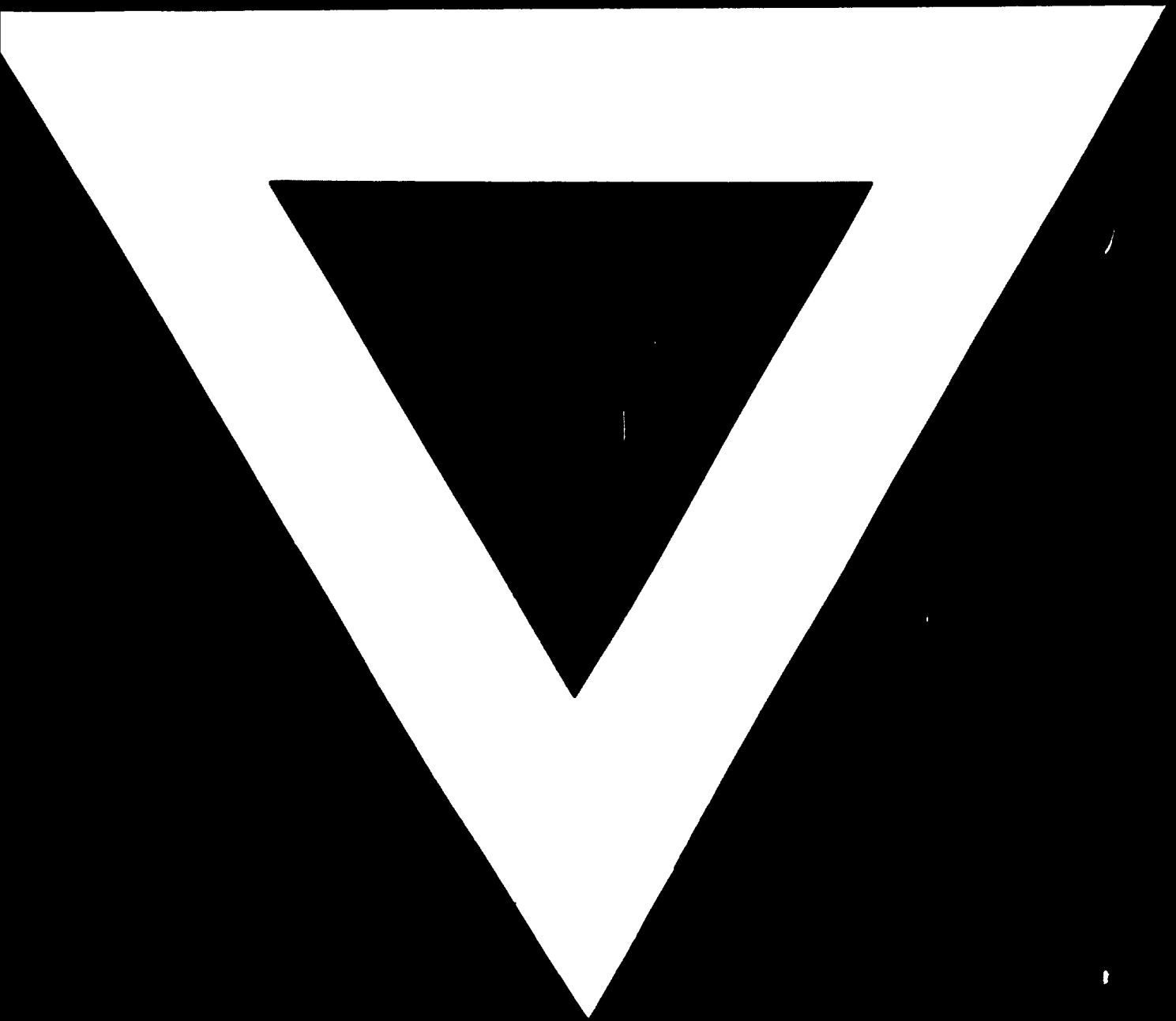
Product A

Date of completion

Quantity 1,000 pieces

	<u>Costs zlotys</u>
1. Direct materials detailed specification attached	4,000
2. Purchase and storage costs 2%	80
3. Direct wages and social insurance	
a. Department I	500
b. Department II	600
4. Indirect running costs	
a. Department I 200%	1,000
b. Department II 150%	900
5. General costs 3%	230
6. Total production costs	<u>7,910</u>
7. Production costs per unit	7,91
8. Selling price per unit	8,50
9. Cost of sale 2%	0,17
10. Total unitary prime costs, 7 + 9	8,08





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