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MACHINE TOOL DESIGN AND PROJECTING OFFICE
IN THE TOOL INDUSTRY IN POLAND^{1/}

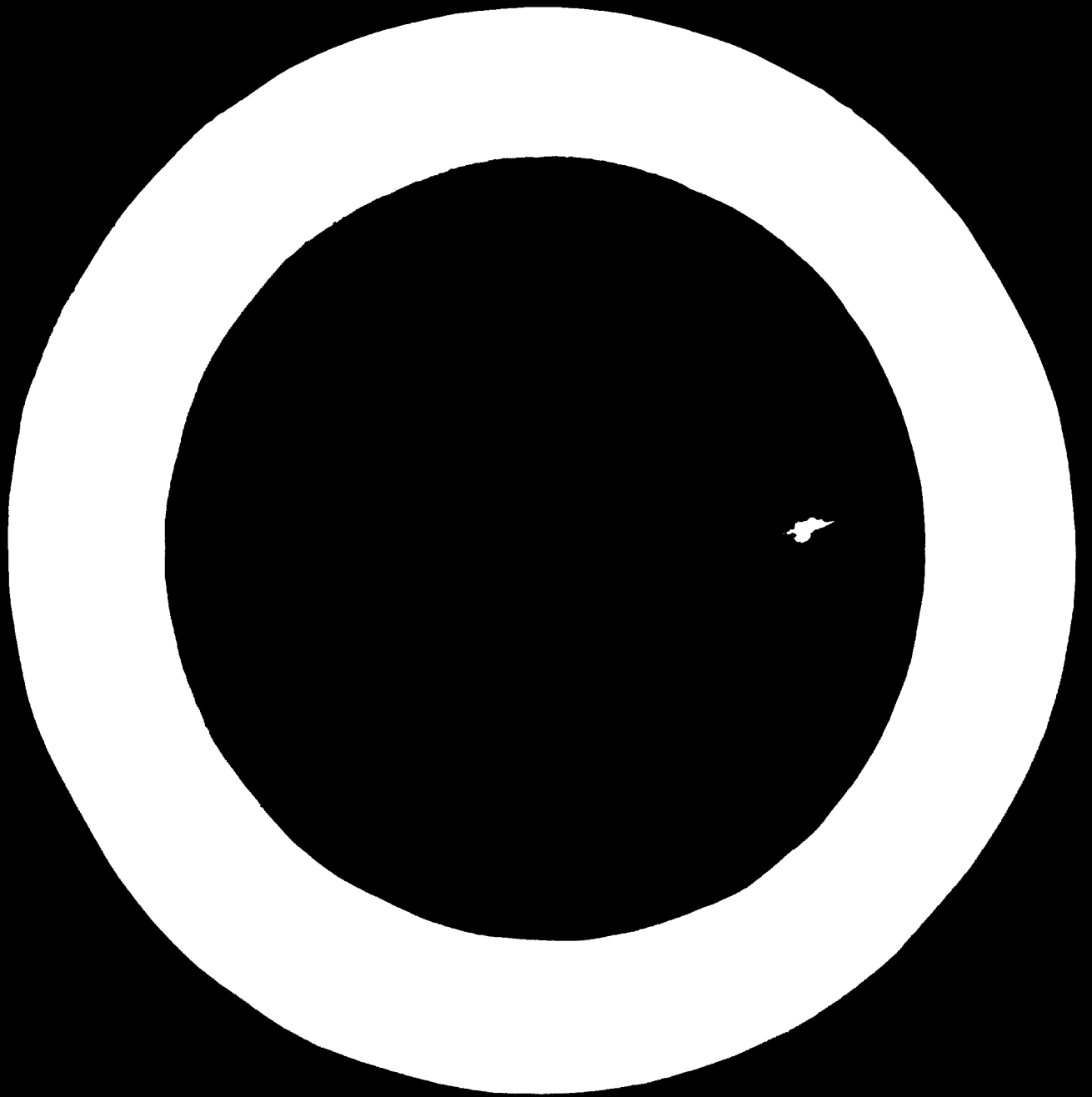
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The machine tool and tool industry, as in other developing countries, has a primary place in the Polish industry. This is owing to the fact that this industry is furnishing means designed for the production of equipment for other branches of the industry. This important function of the machine tool and tool industry in Poland can be noticed in its dynamic development observed after the destruction of World War II.

The estimate value of production of this industry in 1960 grew in comparison with 1950 about 4.7 times and in 1970 it will reach the level of 1,500 % of the production in 1950, i.e. it will be about 15 times higher than in 1950.

This industry is composed of 37 enterprises, of which 23 are designed for the production of machine tools and 14 for the production of tools. It has at its disposal a considerable scientific and technical basis: two specialized institutes, three engineering offices and technological and design office (BIPRON) and one supply and Sales office.

The above mentioned industry is yielding about 1,5 % of the global national income, and is employing more than 40 thousand employees. During the last year an important reorganization was carried out. A concentration of all enterprises in a number of combines took place of what each combine obtained received a separate head-office. The aim of the reorganization was to concentrate all fixed and current assets as well as technical and production potential in one unit in order to strengthen the economic independence of the combines, to diminish the extent of subcontracting deliveries from other sources, to create favourable conditions for the integration of industry and the intensification of the production.

The implementation of these aims will permit to utilize in a better way the existing reserves, to decrease the production costs, to

rationalize all investment activity, to accelerate the growth of exports, to improve working conditions, etc.

Each combine has an experimental enterprise designed for the production of new constructions and prototypes.

During the first years after the end of World War II there was a general tendency to concentrate the design and engineering work of each branch of industry into one office. Due to this policy, the separate branches of the engineering industry were served as a rule by one or two engineering and design offices.

This has changed radically during the period of the last few years and at present the industries of transport, electrotechnique, automation, measuring instruments, metallurgy as well as the machine-tool and tool production have created their own design and engineering offices.

The decentralization is facilitating an extensive specialization in every branch, as well as the selective development of the whole national economy.

The machine-tool and tool industry in Poland, being a favoured branch of the industry, has good perspectives for its further development and modernization.

The technological and design office of BIPROM was created for the purpose of giving advice and guidance for the development of this industry.

The sphere of projecting includes the following:

1. working out of projections of development up to 1985;
2. working out of programmes of development up to 1980;
3. elaboration of programmes of production of all combines and enterprises of this branch;
4. elaboration of the 5-year plan up to 1975;
5. working out of investment projects for all enterprises;
6. putting into effect the investment and supervision of all enterprises in this sphere;
7. starting production in new plants, and supervision of the obtained results.

The process of projecting of investments is effected in two stages:

- working out of technical and economical project data;
- working out of technical plans of implementation (lay-outs, blue prints, etc).

The technical and economical project data includes the general conception of erecting a new plant or extension or modernization of an existing one, together with the presentation of all technical and economic indicators. The project prepared in such a way is being examined and approved by a Commission set up for that purpose by the ultimate user of the project.

The technical and economic data should specify in a precise way the size and outlays as well as the rentability rate of a project. This is owing to the fact that in the second stage -where all precise data of the first stage are at disposal- the costs of the project are not supposed to increase and thus leading to the deterioration of the rentability of the project.

On the basis of the above mentioned technical and economic data approved by the investor, the detailed technical plan of implementation is worked out by the general contractor. It specifies in a precise manner all factors and prerequisites to be fulfilled in order to put into effect the project.

The technical plan of implementation is composed of the following main parts:

- technological layouts
- blueprints of non-standardized constructions
- buildings' layout
- installations' layout
- cost assessment
- economic part

- general description of project
- outline of organization and management
- outline of starting of production

The project is implemented on the basis of the technical plan under supervision of the project's authors who are responsible for the results obtained.

The cycle of preparation of an investment project in the machine tool and tool industry has a duration, according to its importance and size, from one to two years. The cycle of implementation of a project has a duration of 1 - 3 years.

The production starts at the moment of the completion of the project.

The rôle of the authors of a project is not finished at the moment of starting production. They are responsible for the achievements of results set out in the general plan of the project. They are also obliged to supervise the entire future modernization of the project worked out by themselves.

The rôle of the Designing Office of the Machine-tool and Tool Industry is not limited to these tasks only. Beside the tasks indicated by the requests of the different enterprises the Designing Office is performing research on modernization of industrial production, especially of machine-tools. We have a series of advanced undertakings (works) in the domain of standardization and typifying of the technological processes.

We have developed a classifier (classified system) of spare parts for machine tools, equipment and tools. One also has started to work on standardization and unification of parts and elements of machine-tools, equipment and tools.

The Engineering Units of the enterprises and combines are dealing at present with new constructions and designs of machines, equipment and tools. The policy of decentralization permits an establishment of such units and offices within the factories and combines. The activity of these offices is growing.

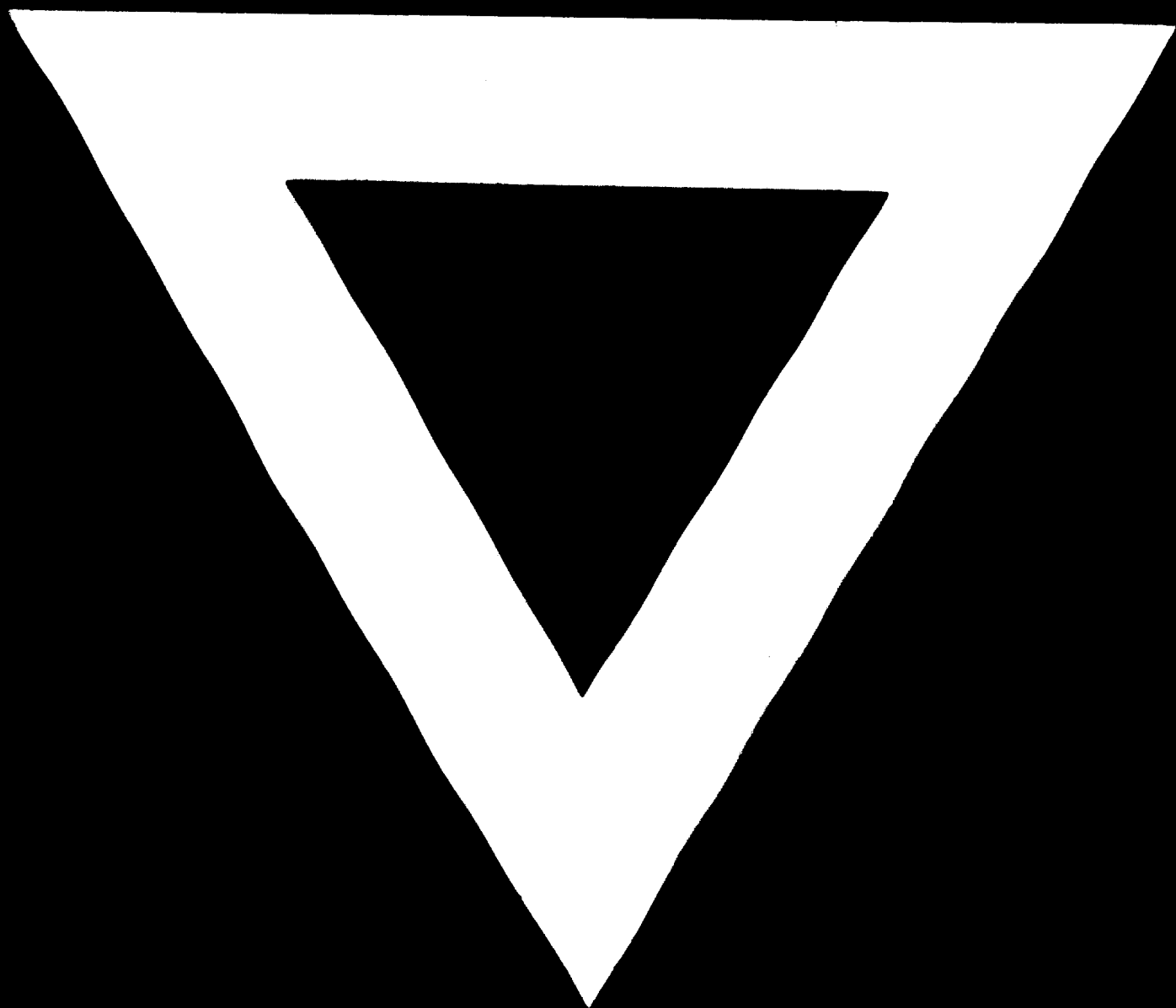
In this branch Poland has registered substantial achievements and it finds itself in the forefront of the European countries. Among others, the representatives of our Designing and Engineering Offices of the machine-tool industry are invited to participate in May 1970 in a conference organized by Canada for the Association of British Brip and Partners Inc., devoted to the problems of work in the field of standardization and normalization, leading to the complex unification of parts and appliances of machine tools, equipment and tools.

Poland is planning to organize a Standardization Centre at the Polish Committee of Standardization. Its function would comprise the coordination of work in the field of standardization conducted within the industry as well as a methodological research work leading to future development.

This short information has the aim of supplying UNIDO with an information on the general direction of work in the sphere of designing and projecting leading to the development and modernization of the machine-tool and tool industry in Poland.

Poland is ready to cooperate with UNIDO in the field of working out specific projects and its implementation.





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