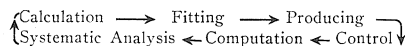


The council is responsible for the general direction of the Institute.

Five men make up the Presidency of the Institute. These men are its administrators, direct its planning and methodology and control the work of its sections.

The structure of the Institute is based upon a system in which practice and method are closely related. The methods employed are corrected by practice and at the same time the practical activity of the Institute supplies the work in methodology with the necessary experience. In this respect the Institute has followed the example of modern machine industry.

In modern machine industry the work of an enterprise must first be calculated and must "fit" in a way which foresees all the details of future work. Then comes the producing process itself. Lastly, this process is controlled and its results verified. The data of control must then in their turn be analyzed and systematically studied. The facts that are thus gathered are then used in calculations and the process is back at the starting point. The organization of an enterprise takes the following form:



The general formula of this scheme can be expressed in three words—"fitting," performing, controlling.

The Central Institute of Labor follows this model of an industrial enterprise. It is an enterprise for the production of skilled labor. A machine works satisfactorily only when it is "fitted" in the right way. With men it is the same thing. A man's movements depend on how his body and nerves are set, and this "fitting" determines his working ability. All the elements which have been mentioned are therefore needed in training. Control and verification are particularly needed. The organization of the Institute corresponds to these functions. The "Fitting" Division performs the

The words "fit," "fitting," are used in translation of the Russian word "outstanovka" and the German word "ein-stellung." These convey the idea of an arrangement of parts, details, mechanisms and organs which predetermine the working process which they perform. The verb "to fit," meaning to prepare, to set into a desired position, seems to be particularly suitable.

work of ordering, "fitting" and disposing of the whole working organism. The work of training is done through the courses. The Division of Control fulfills the function of control and the work of systematization is carried on by the secretariat.

There are two other divisions besides these. One controls the introduction of Institute methods into schools connected with factories. The second is the Division for the Direction of the Local Sections of the Institute in provincial towns.

The Fitting Division

The Fitting Division has for its main object the analysis of different professions, the construction of programs of training for skilled labor and the adapting of workmen to the work in factories, according to the methods of the Institute, and the formulation of the necessary instructions. The Fitting Division is made up of the analytical methodology bureau which analyzes divers industries, improves training programs and makes up programs, and the bureau of documentation which writes up systems, plans and programs and instruction sheets for the student, the instructor and the controller. This bureau is also responsible for drawings and designs and supplies the other divisions and sections with standards, calculation sheets, diagrams, tables, graphs, placards and bulletins.

Training Courses

The training of workmen is accomplished by means of special courses called "Courses A." Such courses are maintained in the seven training sections of the Institute. Two are in Moscow, one in Leningrad, one in Kharkov, one in Dnepropetrovsk, one in Bryansk, and one in Minsk. Special courses for training textile workers have been organized in Ivanovo-Voznesensk and Vichouga. Besides these Courses A, which train skilled workers, another series called "Courses B" has been instituted for training workshop teachers and instructors. The principal aim of these is to prepare factory school teachers for the primary and secondary periods of instruction.

The teaching of Courses B consists for the most part of laboratory and workshop practice which develops the necessary knowledge for industrial teachers. The theoretical subjects in the program

are of an auxiliary character and explain the methods of acquiring teaching ability.

Control

The best planning and producing practice does not attain its end without a system of control. The Institute has therefore set up a Division of Control, which observes and studies all the elements of instruction used in the courses. The student or apprentice remains under the observation of this division from his entrance into the school until his enlistment in the factory.

The first method of control is biological. This is effected through the Selection Committee which selects the young men for the courses. Special provisions regulate this committee and order its work. They cover the constitution of the committee, the organization of its observations, the enumeration of the elements observed, the basis of selection and the forms and order of documentation of the selection process.

The Ambulatory examines the candidates for courses from the medical standpoint, controls the health of the students during the period of instruction and analyzes the data collected as a result of medical registration.

The Laboratory of Functional Diagnosis takes part in the selection of students, examines their hearts and lungs, formulates standards and norms of selection and studies new methods for studying the workings of the heart and lungs.

The Laboratory of Respiratory Exchange analyzes the energetic balance of working organisms and studies ways and means of making such analyses.

The Bio-Chemical Laboratory takes part in the selection of candidates for the courses by studying the composition of their blood. It controls the degree of fatigue during work and studies the action of different chemical compounds on the organism during muscular and intellectual work, with the object of developing a therapy of fatigue.

The Psychotechnical Laboratory takes part in selection by studying the higher nervous functions of the organism. It controls the activity of these functions during the period of instruction and studies their effect upon the development of professional ability.

The Bio-Engineering Laboratory controls the behavior of the students from the point of view of

organization and efficiency. It studies the distribution of the student's time during the working process, and calculates how much time he uses for fitting, producing and controlling. The laboratory uses special controlling apparatus which registers by means of electrical counters the duration of the fitting, producing and controlling activities.

The Laboratory of Production Control controls the materials used in the training process, verifies the precision of the work performed in a given operation, and controls the time used for the work. This Laboratory is also responsible for sorting and rejecting finished products and for determining causes for defective quality. Every student is studied during the whole period of his course from the standpoint of the results of his work, its speed and precision. At the end of his course a curve is drawn showing his progress.

The general functions of control of production in all the workshops is (1) to verify the results of the work done by the students, (2) to evaluate the skill of the workers trained in technical and other requirements, and (3) to establish the defects in the products made by the students to the end that these may be removed.

The Bureau of Clinical Analysis collates and examines the data collected from observations along all three of these lines—biological, technical and organizational. This bureau has four sections. The technical section collates the data resulting from the control of production in all the shops. The biological section studies the connection between the technical and biological characteristics of the apprentices. The statistical section collects data concerning the results of training at the Institute and in the factory schools. The section of contact maintains contact with the workers after they have finished the courses and helps them to improve their work after they are placed in industrial enterprises.

Control as an Instrument of Improvement

In the Central Institute of Labor control is transformed into an instrument of improvement. The work of the Institute starts with the idea that the work of a scientifically organized industrial enterprise, particularly under mass production, needs an accurate and minute organization of control. The controlling division of a modern industrial enterprise fulfills the function of an industrial clinic.