

In it, as in a looking glass, are reflected all the defects and diseases of production. Through the systematizing of controlling data and organization for sorting products, divisions of control are transferred into laboratories which urge the enterprise to continual reconstruction and improvement.

In the same way the organs of control in the Central Institute fulfill the functions of scientific research and investigation. By studying the behavior of the student while working they discover the losses inherent in each individual case of production. By studying progress in speed and precision in the work of each student, by sorting the products which he fabricates and ascertaining the causes of defects, the organs of control create a scientific base for the valuation and qualification of labor.

A further enlargement of the problem leads to distinctions between divers types of modern workers and a description of their characteristics.

#### Evaluation of Qualities

The evaluation of qualities attained through the courses is effected through a Committee of Experts. This committee is formed by representatives from the enterprise which requires qualified workmen and by representatives of the trade union. The Central Institute of Labor sits with the committee in a consulting capacity. It has worked out technical norms for the use of the committee and has worked up a list of characteristics of qualified work according to specialties.

#### The Secretariat

The secretary of the Institute formulates the plan of work, controls its execution, supplies the divisions with work and gives form to its investigations. The secretariat is made up of the Section of Planning and Inspection and the Scientific Secretary, whose principal duty is to study foreign books, periodicals and other material and to correspond with foreign institutions and enterprises. The library of the Institute consists of some twelve hundred Russian and foreign books on the subjects of labor, education and the organization of industry. It receives many Russian and foreign journals—American, English, German and French. All the material on methodology is collected and classified in the archives of the Institute. Models of the work of the Institute, training apparatus and samples of the students' work are displayed in the museum.

The Institute also edits two bulletins—"The Organization of Work" and "The Formation of Labor," one a bulletin for the courses and the other a bulletin for the periodic conferences of factory schools.

#### Instruction in Factory Schools

While it was investigating the problems of training and forming skilled laborers, the Central Institute naturally was confronted with the question of factory schools. It became convinced very early of the necessity of transforming the existing factory schools into a source of regenerated skilled labor and of instilling into them new training methods.

The Institute exerts its influence in this direction through a special Division of Instruction in Factory Schools. This division inspects the schools with regard to the possibility of introducing the Institute's methods into them. Special courses, already described, prepare instructors and inspectors for these schools. At present most of the schools are bound by instructions from their head organizations to replace the old methods with these new ones.

#### Results of Training Courses

On the first of January, 1928, the number of skilled workmen trained at the Institute was 4,849, the number of instructors 1,094—a total of 5,943.

The young men who finish the courses are generally placed in factories through the Labor Exchange. No less than 60 per cent, and in some towns 100 per cent, of them immediately find work in factories. The average earnings of these workers are about eighty rubles a month (\$40.00) in Moscow, and about seventy rubles in Leningrad.

At the beginning the Institute centered its attention upon problems in the metallurgical industry. It did this because in this industry it found the greatest diversity of working methods. The metal industry was the cradle of the science of management. Taylor based his great work on experiments in the metal industry.

The methods worked out have been applied in the other industries mentioned. In the building trades, for example, the Institute has organized courses in five of its sections. But the application of the Institute's methods has acquired particular significance in the textile industry. Its investiga-

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## A Method of Measuring and Rating Management

An Analysis of the Various Phases of Management Resulting in the Setting of Standards for Comparison with Performance

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THE following method of rating management is an analysis of the operating viewpoint with regard to the chief policies of operation, such as the maximum utilization of money, labor, materials, time, production factors, etc., in order to determine the goals or standards of managerial effort. The actual operating results may be compared with these standards to indicate the efficiency of the organization.

An important measurement required for the ratings is the production value of the maximum capacity of the plant. This value is determined from the time studies of the various operations and an investigation of the capacity of the equipment and its balance of manual operation hours. In the case of a plant manufacturing a standard line of products, sales records over a period of five or ten years would indicate the weightings for each product in computing this production value of maximum capacity. In the case of a plant with a varying line of products (printing and stamping industries), or with uncertain sales (transportation, power, or heat service), the value of the maximum capacity may be taken in ratio to past production by comparing the maximum operation hours with the past operating hours.

The measurements of maximum operating time and value of production indicate the necessity of ratings on the basis of time and value comparisons as determined by the operating policy of the department or phase considered. For example, in the production phase the efficiency of the utilization of labor may be measured in terms of hours or money, while in measuring the efficiency of the utilization of the overhead factors (rent, power, insurance, depreciation, etc.) the ratings can be made only on the basis of value.

In this method of rating, there are five chief phases: sales, purchasing, production, general management (including financial control), and devel-

opment. With the exception of development, all ratings in each phase are given in terms of percentage efficiency. In the case of the development phase, the ratings are given in terms of percentage increase since there can be no standards set for the growth or development work.

Securing the data required for these ratings has indicated the necessity of deciding on the representative period in order to secure ratings representative of the character of the management. In most instances, management ratings for the past fiscal year or for the year ending with the start of the investigation are representative. It may be necessary, however, to secure ratings over a longer period, in which case data should be collected for the period measured. This method of rating is quite adaptable to any period.

The writer does not claim that the following classifications of policies can be used without change in every case. However, the investigation which the plan requires would point out those policies in individual cases which should be included in the final ratings.

The ratings are of particular importance to the large organization because of the standards set for related phases of operation. It is impossible to maintain high ratings for each phase in industrial operations, but the efforts of the management to achieve the standards of operation for high ratings is an important factor in developing the organization to a high degree.

#### Ratings in Sales Phase

##### Policies:

1. Secure orders for the maximum capacity of the plant.
2. Secure orders to allow for uniform production.
3. Secure good accounts.
4. Protect the concern against losses.