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REORGANIZATION OF INDUSTRIAL HYGIENE ON A SCIENTIFIC BASIS

- USSR -

by I. Rysakov

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Following is a translation of an article by I. Rysakov in Okhrana truda i sotsial'noye strakhovaniye (Industrial Hygiene and Social Insurance), No. 5, Moscow 1959, pages 28-30/

One of the most important concerns of man is the prolongation of life--the prolongation of his productive span. Much has been done in this direction in our country. Take for instance the question of industrial hygiene. The practice of everyday life indicates that working conditions in industrial enterprises are continuously being improved. At the same time, many serious problems remain unsolved.

Our machine-building industry, for example, is the creator of the world's most advanced technology, but even here we have not yet rid ourselves completely of heavy, tiring, and dangerous production processes. Accidents and occupational diseases are still frequent as the result of deficiencies in the design of equipment and the unsatisfactory solution of problems relating to safety and the technological process.

These deficiencies are frequently mentioned in the central, republic, and regional press, and in the inspection statements and instructions for technical inspection put out by the trade unions.

The industrial scientific research and design-and-planning institutes are working out engineering, technological and other production themes without sufficiently taking into account the conditions under which service personnel must operate the machine tools, machines and equipment designed by them.

In its turn, industrial management frequently allows production processes to be organized on premises and at industrial sites which do not meet health standards. Shops, and sometimes entire plants, still employ machines, machine tools, equipment and other means of production which are to some extent dangerous or harmful to man.

And, finally, some industrial scientific research institutes and establishments are hardly making any study of the danger or harmfulness of existing technological processes directly at the plant site, nor are they conducting a detailed investigation of the causes of industrial injury or occupational disease.

The great achievements made by our country in the field of science and technology and the growth of the material base of industry and of the cultural level of the workers permits us to demand from industrial management broader and more effective measures for the protection of labor, to attain a decided improvement in working conditions on a scientific basis, and to eliminate injury and occupational disease.

The time has come to introduce the most advanced processes, types of machine tools, machinery and other equipment, and to review the existing equipment and established technological processes from the standpoint of industrial safety and health. All our energies must be mobilized toward this end.

First of all, every industrial scientific-research and design-and-planning institute must be given appropriate tasks for working out jointly with industry the complex solutions for making working conditions more healthful and safe. This must be adhered to in the construction of new plants, the redesign of existing shops and plants, the improvement of production processes, and the development of special health measures.

To ensure effective solution of problems regarding technological safety and health, the industrial scientific research and design-and-planning bureaus must work in close contact with the appropriate scientific-research institutes of the USSR Academy of Sciences, the ministries, and the labor safety section of the VTsSPS (All-Union Central Council of Trade Unions).

We can no longer tolerate a situation where, because of the inadequate provisions of the scientific research institutes and the design-and-planning bureaus, industrial enterprises must construct make-shift protective, safety and other attachments for new machine tools and machinery and must additionally construct hoisting and conveying devices, ventilation installations and many other contrivances for easing working conditions and for protecting workers against the harmful effects of dust, gas, noise, vibration, radiation, etc.

No less essential is that every industrial enterprise conduct work on industrial hygiene. This condition arises primarily from the fact that the current production volume and level of technology significantly increase administrative responsibility for the protection of labor.

Apart from this, plant managers should make a detailed investigation of the causes of injury and occupational disease, on the basis of which production can be so organized that the life and health of workers is not exposed to danger.

Constructive activity in industrial hygiene can be conducted directly at the plant by a number of methods, depending on the volume of operations, the nature of production, and other technical and economic conditions.

The most expedient form of constructive activity for worker safety, in our opinion, is the creation of industrial experimental laboratories for industrial hygiene at leading plants in the fields of machine building, metallurgy, power, chemistry, etc.

Each such laboratory, with a staff of 10 to 15, can serve an entire group of related enterprises and coming under a single branch administration of a sovnrarkhoz (Council of National Economy).

This laboratory must be located directly at the plant site. A close tie between the laboratory staff and production and, most important, with plant personnel will permit fruitful solution of the most immediate problems of safety and industrial health and will allow rapid introduction of new achievements in the field of industrial hygiene.

The entire operation of the experimental research laboratory for industrial hygiene must be based on a plan of activities worked out jointly with the group of enterprises it serves and approved by the branch administration of the sovnrarkhoz. This plan must include only such work which has a direct relation to industrial hygiene and which is of practical value for eliminating the danger or harmfulness of existing production processes.

These urgent activities might include, for example, the thorough investigation of industrial injuries and occupational diseases with the simultaneous study of working conditions. The carrying out of such work will enable us to discover the causes of accidents and diseases, create standard working conditions and improve production efficiency.

No less important is the organization of comprehensive inspection in the separate sectors of production to determine the nature and extent of their harmfulness or danger.

The laboratories must engage in developing various types of protective and safety devices, which the enterprises sorely need. We might mention, for example, special guards for cutters, taking into account the great variety of parts and devices being turned out for protecting a worker's hands from the danger zones in presses, rollers, shears, etc.

The activities of the laboratory also must include the rendering of technical assistance in industrial hygiene to the plant administration, the organization of examining committees and consultation, the summarizing and dissemination of achievements in industrial safety and health, and the development of methods and visual aids for problems of industrial hygiene with consideration for local conditions and the specific character of production.

Thus, each industrial experimental-research laboratory must become for a certain group of plants a center of research and creative activity.

The laboratory can collaborate extensively with scientists, designers, technologists, and other engineering and technical personnel, as well as with skilled workers.

In one machine-building plant under the Moscow Oblast Sovnarkhoz, such an experimental research laboratory has already been established, serving several related enterprises. Its plan of activities for 1959 calls for carrying out the most urgent of tasks. These include: investigating the danger of harm in casting, forging and other shops; compiling hygienic data for these shops and developing the necessary measures for eliminating the danger or harmfulness discovered; studying the causes of accidents associated with certain types of equipment, and designing the necessary attachments for protecting workers from injury during operation of equipment; studying the conditions, procedure, and nature of industrial hygiene indoctrination for new employees, as well as instruction in production techniques directly at the work site and the development of methods, visual aids and other materials with consideration for local conditions of production; and a commission of experts for projects involving plant remodeling with regard to industrial safety and health.

Apart from this, the laboratory is engaged in preparing a technical information bulletin of materials for public review of industrial hygiene, technical resolutions regarding specific problems of safety, etc.

The laboratory collaborates with scientists and scientific personnel of the institute of industrial hygiene and occupational diseases of the AMN SSSR (Academy of Medical Sciences, USSR), the All-Union Moscow Scientific Research Institute of Industrial Hygiene of VTsSPS, and the department of safety engineering of the Moscow Steel Institute imeni Stalin.

The industrial experimental-research laboratories will help solve one of the most important problems of industry--the elimination of injuries and occupational diseases.

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