This task must be facilitated by the further development of scientific and technical collaboration between the member countries of Comecon and the development of specialization and cooperation in the production of medical engineering goods. The solution of medical engineering problems of ever-increasing complexity also depends on the further strengthening of creative collaboration between medical and engineering specialists, which has become a worthy tradition in the Soviet Union.

Toilers in the medical engineering industry, like the entire Soviet people, greeted with great satisfaction the decisions of the May (1977) Plenum of the Central Committee of the CPSU and the speech by Comrade L. I. Brezhnev, General Secretary of the Central Committee of the CPSU and President of the Constitution Commission, "On the draft constitution of the union of Soviet socialist republics." The discussion of the draft of the new constitution of the USSR, taking place on the eve of the 60th Anniversary of the Great October Revolution, is a powerful stimulus to the further increase in creative activity of employees at factories in the medical engineering industry to bring to fruition the resolutions of the 25th Congress of the CPSU.

**LITERATURE CITED**


**BASIC PROBLEMS IN THE DEVELOPMENT OF MEDICAL ENGINEERING IN THE 10TH FIVE-YEAR PERIOD**

I. P. Smirnov

Considerable progress was achieved in the development of the medical engineering industry during the years of the Ninth Five-Year Plan compared with 1966-1970: the volume of production was increased by almost 50%; about 600 new types of production were put in hand; combinations of medical engineering products satisfying the demands of modern medicine were created; production of modern physiotherapeutic apparatuses utilizing all ranges of radio frequencies selected for medicine, all luminous (including laser) and other forms of radiation was organized; the production of equipment for resuscitation departments and intensive care units was developed and organized; the production of apparatus for radiolotope diagnosis and radiotherapy was put in hand; modern designs of automatic sterilizing equipment were created; the foundations were laid for the use of mathematical methods and computers for controlling production and for development of the designs of several diagnostic systems and instruments; a number of new types of instruments and apparatuses for diagnosis and treatment was introduced; the most widely used traditional instruments, such as electrocardiographs and electroencephalographs, were modernized, thereby greatly improving their quality and reliability; the use of modern construction materials such as polymers, stainless steel and aluminum alloys, was greatly increased; and automated technological assembly lines for the production of pulp extractors, and for galvanizing, painting, and varnishing were organized.

An important result of the ninth five-year period has been the involvement of enterprises belonging to practically all the mechanical engineering ministries and departments in the production of medical engineering goods, so that a sound basis was created for further development of the medical engineering industry as a branch of the national economy.

Development of this branch has been facilitated by the consolidation of the All-Union "Soyuzmedtekhnika" Combine and its republican divisions, the creation of technical engineering services in medical establishments, and the improvement of coordination between the work and specialization of ministries and departments engaged in the development and production of medical engineering goods.

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As comrade L. I. Brezhnev pointed out in his speech to the 25th Congress of the CPSU: "Among social tasks there is none more important than care of the health of the Soviet people. Our successes in this direction are well known. However, it is necessary to see the problems that face us in this area. They are connected with improvement of the organization of health care, the expansion of the network of hospitals and polyclinics, and an increase in the production of medical equipment and of highly effective remedies."

Care of the health of the population is not only of social, but also of great economic importance. The working section of the population still loses too many working days when visiting polyclinics and medical centers.

One of the most tested methods of reducing losses of working time in the national economy is by the wide and complex use of technology. Health care is no exception in this respect. Technology must therefore increasingly exert its effect on the improvement of work organization in all the stages of health care. It will be evident that technology, depending on the tasks to be solved by the health service, must yield economic benefits primarily in the provision of prophylactic measures connected with protection of the atmosphere, water, and soil and the ensuring of healthy conditions in the factory and during everyday life. In this category are included various filters for the purification of spent gases and effluents, disinfecting devices, protection against harmful natural and artificial radiations, antinoise and antivibration measures, devices to provide an artificial microclimate, and work safety technology.

Technology provides great benefits in health care establishments if used to carry out operations connected with auxiliary and nonmedical work processes, such as transporting and lifting patients and loads, the preparation and issuing of food, the washing of dishes and medical utensils, the provision of bed linen for the patients, intrahospital and interhospital communications services, and so on. The tasks listed above play an important role in the creation of protective and health-giving comfort in medical establishments. If it is recalled that these tasks are extremely laborious and that it is in respect to this type of services that most complaints are made by the patients, their tremendous importance in the life of health care establishments will be obvious.

Unfortunately, the general engineering equipment supplied to medical establishments is usually similar in design and construction to that used in the country in general. This is evidently the reason why the development of general engineering goods designed for the establishments of the health service does not rest on a serious scientific, experimental-design, and production basis but is uncoordinated and does not taken into account the economic, psychological, and hygienic aspects of the work of medical establishments. As a result, this "secondary technology" lags increasingly behind modern requirements for medical establishments.

In the "Main directions of development of the national economy of the USSR in 1976-1980," adopted by the 25th Congress of the CPSU, it was stated: "...apply the achievements of modern science and new methods of diagnosis and treatment more widely in medical practice. Strengthen the prevention of diseases. Fully satisfy the needs of the population and hospitals and preventive establishments for therapeutic substances and medical engineering goods. Improve the quality of medical aid and the level of organization of the work in the establishments of the health service."

The 25th Congress of the CPSU laid this task before the medical industry: "Increase the production of the medical industry by 44-46%. Create and organize the production of new and highly effective therapeutic substances, automate standardized electronic instruments and apparatuses for mass medical examinations of the population and improve the diagnosis of diseases and the treatment of the sick. Greatly increase the output of synthetic hormones, insulin, endocrine and x-ray contrast preparations, made-up medicines for children, spectacle lenses and frames, medical instruments, laboratory medical equipment, and measures for the mechanization of work in hospitals....".

"To satisfy more completely the requirements of health service establishments and the population for medical articles, an increase in their production is planned at enterprises both of the medical industry and of other branches."

The fulfillment of the decisions of the 25th Congress of the CPSU calls for great efforts on the part of workers both in the medical industry and in health care and also in practically all branches of the national economy. Care of the health of the population and the development of the technical equipment for the health service have thus become a common task for the whole population. However, to organize the production of modern engineering goods capable of considerably increasing the efficiency and productivity of labor in the health service, organized on a nationwide basis, a number of difficult problems related to the population and the economy of the country as a whole must be solved. The most important of these problems are as follows.