PARTY DISCUSSION IN ACTION

A major part is to be played by improved metrological support to production in achieving the tasks laid down by the Tenth Five-Year Plan, since this is one of the main features of the full implementation of quality-control systems. Many of the leading organizations in the country already implement fairly detailed systems for metrological support to production, particularly as regards automated monitoring of instruments, certification of test and measurement facilities, and other aspects that govern the quality of products at all stages of production. Organizations in Latvia have played a considerable part in the field; we publish below a series of papers illustrating the advanced metrological services of this republic, as well as the creation of state test centers, the definition and introduction of comprehensive quality-control systems, and the stands presented by the republic at the "Metrology and Measurement Techniques-78" Exhibition.

METROLOGICAL SUPPORT TO THE QUALITY-CONTROL SYSTEM OF A UNION REPUBLIC

V. G. Markot

The program "Definition and introduction of a quality-control system in the Latvian SSR in 1976-1980" forms part of the five-year plan and envisages the definition of various organizational, scientific, economic, and other measures intended to increase the output of products of the highest quality.

In the first stage, it was intended to increase the output of units of the highest quality by at least a factor of three, so that the proportion of these in total output should rise 25%. Correspondingly, most of the ministries, departmental bodies, and production organizations in the republic with links throughout the Soviet Union laid down long-term joint plans for improving technology and quality control. Much attention has been given by the regional committees of the quality-control board to the improvement of metrological support to production.

Ongoing improvements in metrological support are essential to ensure industrial development, the proper provision of measuring and test equipments, and extension of measurements and tests designed to improve the general standard of accuracy in manufacture. Therefore, very detailed plans have been formulated for metrological support, which have been implemented in parallel with modernization and re-equipment of many processes, along with the introduction of advanced techniques, automation, and mechanization.

The Council of Ministers of the republic therefore charged the ministries and other bodies in the republic with the task of undertaking measures to improve metrological support in all areas. Most of these organizations have consequently set up or enlarged their own metrological services. Further, the activities undertaken by such services have radically altered. Not long ago, these services provided mainly purely preventive support to means of measurement, whereas now they handle a much wider range of services. The joint plans for improving quality control include measures for examining the general state of the art of measurement in various branches of the economy, as well as of the metrological level of support to development work and evaluation of the performance of tests performed during

---

Industrial-Transport Division, Central Committee of the Communist Party of Latvia.
Translated from Izmeritel'naya Tekhnika, No. 12, pp. 3-4, December, 1978.
quality control at all stages from development to end user. The requirements and scales of many modern industrial processes demand increased attention to complex nonstandard means of test and measurement, which themselves require metrological certification.

All of these aspects have been handled by close collaboration with the Latvian board of the State Standards Commission, which has provided assistance with methods and organizational measures, particularly as regards the state supervision of product quality and systematic analysis of the state of metrological support; this has involved extensive discussions with the staffs of the ministries and other bodies throughout the republic.

Improved product quality, including improved metrological support to production, is closely related to labor skills and public spirit in the working population. City and regional committees of the party and parallel bodies in the organizations have run many courses on quality insurance, which have gone along with research on many aspects of the implementation of the recommendations made by the quality-control board, and specialists have particularly researched problems in metrological support to various important aspects of production. The staff of the Latvian board of the State Standards Commission have been particularly involved in these developments, as have instructors from higher teaching institutions and leading specialists in many industrial organizations.

The Riga advice and training center of the All-Union Institute for Advanced Training of Engineering Staffs has now trained about 1200 metrological specialists particularly concerned with standardization, product quality, and metrology.

This purposive and systematic effort in metrology has already provided some very definite results. In particular, the use of narrowly specialized and nonstandard but advanced means of measurement and testing in the Ministry of the Light Industry of the republic has involved the reexamination of much scientific and technical documentation, particularly to tighten quality specifications. For example, the standards for wear resistance have been raised, while a standard has now been laid down for color-fastness in various forms of cloth such as Imanta, Utro, and Antra. The tear resistance of the Varis and Sana fabrics has been improved, and tighter specifications have been introduced for the whiteness of knitted fabrics and articles made from these.

Various physicomechanical parameters have also been examined for the first time (shrinkage factors, softening and antistatic treatments, pilling), in addition to other more technological parameters, with particular attention to producing the very highest quality.

The Al'fa production organization has introduced automatic measuring systems, which have raised the productivity of quality controllers by a factor of 1.5.

Specialists at the Riga VEF State Electrical Engineering Plant have devised a method of performing accelerated tests on radio equipment, in which working conditions are simulated during production. This has led to improvement in various components shown to have elevated levels of fault experience, while some assembled units have been redesigned, which has led to very considerable reduction in the number of claims under warranty, while at the same time the warranty period for radio receivers has been raised to three years.

Units for metrological support to production have been developed for all levels of quality control; units responsible for standardization and for managing the checking of means and of testing and measurement have been set up at many plants and factories, which have ensured proper exploitation of such measures.

The Latvian board of the State Standards Commission has collaborated with the All-Union Metrology Research Institute in the definition of interim specifications for quality control in the Latvian SSR, particularly metrological support to production and basic concepts; this document lays down the sequence to be followed in organizing metrological support to production.

The board has also performed a great deal of work on organizing tests on mass-production goods throughout the republic; various standards for the republic have been laid down that define the sequence to be followed in organizing and performing tests on industrial products. The board has collaborated with ministries and other bodies in organizing test centers in various branches of industry. The standardization and metrology center at present being founded in the republic will include a state test center for domestic radio equipment and