THE ROLE OF GKLs (STATE INSPECTION LABORATORIES) IN DISSEMINATING THE EXPERIENCE OF FAULTLESS MANUFACTURE OF INSTRUMENTS

B. L. Sokolov

Translated from Izmeritel'naya Tekhnika, No. 6, pp. 56-58, June, 1964

A seminar of administrators and experts of the RSFSR (Russian Soviet Federated Socialist Republic) instrument-making plants was held this year in Penza on the subject of the faultless manufacture of instruments and their supply on first request to the OTKs (Technical Control Divisions) and the customers. The seminar was attended by more than 600 persons, and papers were read on the organization of such supplies, on the economic efficiency of such a system, and on the part played by the laboratories, scientific-research institutes and design offices in improving the quality of instruments. The speakers related the experience gained by the enterprises in applying the system, which has become widely known owing to the initiative displayed by the Saratov plants.

Experience has shown that the new method has received the recognition which it deserves. As a result of its application the enterprises of the Volga Region Sovnarkhoz (Council of National Economy) have sharply raised the efficiency of their production and ensured the supply on first request to the OTKs and the customers of up to 90-98% of the required articles, thus reducing the number of complaints from customers.

The State Inspection Laboratories for Measuring Equipment, which systematically control the quality of production at the instrument-making plants and adopt measures for improving the quality of the produced instruments, must assist in every way the rapid adoption of the new method. The tasks of the GKLs consist not only in popularizing this method, but also in using their authority for encouraging its adoption in all instrument-making plants.

Experience has shown that the successful adoption of the new method will require organizational and technical measures and, in the first place, more stringent regulation of the activity of those directly responsible for production: the workers, foremen and shop foremen. It will be necessary to organize production conferences for the regular and timely analysis of all outstanding instances entailing the production of defective instrument components and units: the breaking of manufacturing procedures and the rejection of finished instruments, owing to their unsatisfactory quality, by the OTKs or the GKL inspection stations; of all the documents relating to State or periodic instrument testing by the GKLs in which they refer to the produced instruments' low quality; and of all cases when unsatisfactory instruments are presented for State testing.

It is necessary to insist that the Sovnarkhozes issue an instruction forbidding chief engineers, the heads of OTKs, chief technologists and other engineers and technicians at the plants to either consider or issue temporary permits for delivery to the OTKs or customers any components, units or instruments manufactured with deviations from the approved drawings or specifications. It should be noted in this instruction that the components made with deviations from drawings and specifications will be immediately rejected, and the persons responsible for their production found and reprimanded.

The existing experience has shown that the successful application of the new method is attained if the factory instruction assigns each worker to the production of a given component or unit. Therefore, it is necessary to insist that the plants adopt this method and forbid the production by anyone else of the components and units allocated to a given worker. At the same time the shop and section foremen should inspect personally the instrument components and units made by their workers before these articles are submitted to the OTKs.

Whenever an OTK inspector discovers in a batch of components or units a defective article, it is advisable for the entire batch to be returned for retesting and correction. A second submission of components for testing must be
accompanying written permission from the shop foreman, and should only be allowed if the reasons causing the rejection of the entire batch are definitely eliminated and measures are taken to prevent a repeated rejection of the batch. Dispatchers must not be allowed to provide operatives with current work until the components or units previously rejected and returned by the inspector for retesting or correction have been completely disposed of.

The adoption of the method for faultless manufacture of instruments and their supply on first delivery raises considerably the part played by the OTK personnel at the plants. Therefore, it is necessary clearly to define the basic conditions which will provide successful operation of the OTKs according to the new method. These conditions should provide: that each OTK inspector is allocated to a group of workers for receiving components and units only from that group; that it is forbidden to transfer inspectors to other sectors, or to transfer components and units allocated to one inspector for testing by another inspector; that inspectors are forbidden to pass any rejected instrument components or units, or correct them in any way; that inspectors are made responsible for keeping a strict record of the rejects in the production of their group of workers and a record of supplying the operatives with materials on first delivery; for a compulsory recording in the work-allocation orders of the components and units which have either been accepted or rejected after their correction; for registering the rejected articles, and for delivering articles and components to the dispatch department, which sends them to their destination.

Particular attention should be paid to careful testing and production of the first components and units of a first batch of newly-produced instruments. This requirement is the basis for the correct future development of the technological process.

Each instrument-making plant should work out together with its GKL and bring into effect the "Regulation on the method for faultless supply of production to the plant OTK and on the transfer of individual operatives, groups and sectors to self-inspection," of whose various conditions the following are the most important.

The delivery to the OTKs of mixed products which include both high-grade and defective articles is forbidden. Workers account separately for their high-grade and defective production to the BTsK (Bureau of Central Cataloging) according to their work-allocation order which lists the number of components received from the stores.

The BTsK Inspectors accept articles according to their manufacturing specification and the work-allocation orders. Moreover, in accepting a batch of articles the inspectors enter on the work-allocation order the number of accepted and rejected articles.

An operative is credited with faultless production only on its first delivery. A repeat delivery of the same batch of articles after their correction is not considered to be faultless.

For each work-allocation order of faultless production the operative is entitled to a bonus of an amount specified by the "Regulation."

An operative who during a complete month delivers faultless articles has a preferential right for bonuses from the foreman's allocation.

The index of faultless production for individual operatives, sections and shops is defined as the ratio of the number of delivered faultless batches of products to the total number of delivered batches. This index is expressed as a percentage and is taken into consideration in allocating a place in socialist competition to a shop or a section.

It should be stressed in the section dealing with the transfer of individual operatives, groups and sections to self-inspection rights by the heads of sections, shops and BTsKs in agreement with the trade union shop committees and the heads of the plant OTKs.

The method of registering and stamping finished articles, components, units and instruments, the types and shapes of stamps are determined by appropriate factory instructions, with the test and acceptance stamps for finished articles and the method of their application being established according to the rules of the State Committee of Standards, Measures and Measuring Instruments of the USSR.

The factory OTK issues and keeps a record of personal stamps.

The factory BTsK has the right to carry out check inspections of the quality of production and adherence to technological processes, irrespective of the granting of self-inspection rights.

It should be borne in mind that the Sovnarkhozes (Councils of National Economy) have established a method...