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THE QUALITY AND RELIABILITY OF PRODUCTS

Editura didactică și pedagogică, Bucharest, 1976.

The quality and reliability of products represent a major problem of our state's economic policy. At present, in the context of the profound transformations at all levels and in all fields of socio-economic life, the increase of the quality of products, the obtaining of new products with qualitatively higher characteristics and competitive at a world level become the main task of all branches of the national economy.

This has caused that an increased attention be granted to the subject "the Quality and Reliability of Products" in the economic higher education.

The present study meets with these tasks of utmost importance in the training of future economists and its author has been able to turn to account his vast experience and preoccupations in the field of the quality and reliability of products already in his last student years.

The book which has been elaborated so as to represent a printed course for the students of the Faculty of Economic Cybernetics and Statistics, is through the way it has been achieved, equally intended for those concerned with the problem of the quality and reliability of products, be they researchers or direct users of these concepts.

Chapter one approaches the general problem of the quality and measuring of quality, laying particular emphasis on the problem of increasing the quality of products — the main objective of the economic policy.

Chapter two tackles the problem of ensuring also the control of the quality of products as a general problem, underlining the part played by the human factor in this respect, the modern conception on quality control, the control system of products quality in our country, the record system used in the field of the quality of products.

Chapter three refers to an extremely important aspect, namely the economic implications of the improvement of the quality of products, underlining the relation between quality and social labour productivity.

Chapter four approaches the analysis of the evolution of the production process, indispensible for the selection and application of concrete quality control methods either during the fabrication or reception flow. Starting from the notions of dissemination and tolerance fields, methods are approached of big or small volume soundings, criteria of

checking the random character of observations or of concordance of empirical distribution with the theoretical one for the well defined aim to be used in concrete control methods.

Chapter five comprises the classical control methods under way including the method of calibres.

Chapter six is preceding the following chapter considering that basic notions of the planning of experiments are given with a view to establishing the optimum parameters of the technological process by using the steepest descent method and the evolutionary operation method.

In chapter seven, the author deals with the control of the products entering the economic circuit by methods specific of mathematical statistics, considering the random character of the investigated phenomenon. Therefore, it is specified from the very beginning that the point in question is about a control by sounding as a reception method, control methods on the basis of attributes or on the basis of measurements with acceptation or rejection decisions on the basis of a simple or multiple sounding going to be studied afterwards. It also presents truncated or non-truncated sequential methods with precise indications about the concrete modality of establishing the control levels.

The last chapter approaches problems on the reliability of industrial products as they are formulated by industrial practice, succeeding to place at the readers' disposal a minimum of theoretical knowledge to enable them effectively solve some concrete problems.

The whole material presented in this study is well selected and presented in a rigorously scientific form and at the same time accessible also to those less cognizant of the theory of probabilities or of mathematical statistics. Though no proofs are given for the methods presented, the explanations are well made and the multiple concrete examples provide a good understanding of the material presented and this contributes to the high standard of this study.

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