



COMPETITIVE TOLERANCE OF PRODUCTS IN LIGHT INDUSTRIAL ZONES

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Abstract

The article deals with the current state of the world textile market. The analysis showed that rapid access to the textile markets of developed countries is mainly carried out by national companies that are integrated into the global textile industry. In the article, the author investigated some features of the production activity of light industry enterprises: the structure of the industry, the application and consumption of light industry products, factors of placement of light industry enterprises. Areas of application and consumption of light industry products are described. In conclusion, recommendations for improving the technological cycle in the textile industry are given.

Keywords: light industry, textile industry, features of the industry, structure, economy of Uzbekistan.

In the article the features of the development of light industry sector in the consideration of the emergence in global market are discussed. The features of light industry are the insignificant need for capital investments, constant growth, rapid capital turnover. Therefore, this industry has become the starting point in the economics of developed countries, and in developing countries it is considered with high priority. This paper presents the experience of the development of light industry in China, Turkey and Kyrgyzstan, where there is a constant increase due to the steady increase in demand for products. Through the implementation of a wellthought-out strategy covering the macro, industry and micro level, the success of light industry development has been achieved in most countries. Light industry as an industry is a set of enterprises, producing goods that compete with each other and meet similar needs. The demand for light industry products is constantly growing. Buyers increasingly prefer high-quality goods, although in the recent yeas price was the determining factor when choosing a product. Light industry is a powerful diversified complex, both in the production of consumer and industrial goods, and carries out both the primary processing of raw materials and the production of finished products. Considerable attention is paid to the development of light industry in many countries





of the world, since this industry has considerable socio-economic importance, ensuring high employment of the able-bodied population, particularly women's population, reducing social tensions and improving the standard of living of the population. One of the main advantages of this industry is that in terms of consumption it occupies the second position after the food products consumption. During the manufacturing process, component's dimensions are affected by a number of variables including the structure of the process machines, wear of the machining tool, skill levels of operators, precision of the inspection instruments, measurement environment and variations in materials. Thus, it is impossible to produce components with exactly the same dimensions. The variation exists because no production process is perfect. Often times, controlling this variation is attempted during production when substantial effort and resources, e.g., time, money, and manpower, are required. Manufacturing variation is the range of values that a product's dimensions assume during manufacturing. The range of variation specified (permitted) in design is called tolerance. According to the American Society of Mechanical Engineers (ASME 1994) tolerance is the total amount by which a specific dimension is permitted to vary from a nominal value. The tolerances are assigned to components to account for the dimensional and form variations. Design engineers would like to assign narrowed tolerances, so that functional satisfaction of products can be ensured. However, manufacturing engineers usually prefer to use wider tolerances. Because achieving tight tolerances during production needs substantial effort and resources, e.g., time, money, and manpower, are required. Wider tolerances imply that the difficulty of producing parts is minimized. Thus the manufacturing cost of products will be reduced. The proper amount of tolerance assignment is trade-off between these factors. Tolerances also greatly influence the selection of production processes by process planners and determine the assemblability of the final product. Tolerance specification, then, is an important link between engineering and manufacturing.

The tolerance design principles like tolerance analysis, tolerance allocation, cost - tolerance relationship, minimum cost tolerance allocation, controlling process variation parameters (mean shift and process variation) were discussed in this paper. The contribution of authors in this area also discussed. Some typical case studies are presented to illustrate the tolerance design methods discussed.





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