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TWO-WAY ANALYSIS OF THE VARIANCE TO DETERMINE THE SIGNIFICANCE OF THE INFLUENCE OF FACTORS „SLED LOAD“ AND „AREAL MASS“ ON THE STATIC COEFFICIENT OF FRICTION AT REST, FOR COTTON-TYPE FABRICS

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With our multifaceted activity, we discover more and more diverse textile materials in terms of composition and structure. The degree of their knowledge is an essential stage that leads to the study of the possibilities of different tissues. Of particular interest is the influence of various technological factors separately and jointly on the static coefficient of friction. In the present work, priority is given to the load on the sled and the areal mass of the textile materials, as the main technological factors influencing the friction processes in textile and sewing production.

In recent years, natural textile materials have gained special relevance. This motivated the conduct of the present research with one of the most widely used natural textile materials, namely cotton type fabrics.
In the context of the above, the purpose of the present work is to establish the significance of the influence of the factors:

- Fa – sled load, g
- Fb – surface mass of cotton-type textile materials, g/m², on the static coefficient of friction.

To achieve this goal, a statistical-mathematical method of analysis and evaluation – two-factor variance analysis was applied, as it is particularly effective in studying the influence of several factors separately and jointly.
Cotton-type textile materials with a composition of 50% cotton – 50% polyester were used for the research. As a results of the research and analysis, it has been determined how significant the influence of the factors „sled load, g and „area mass of cotton-type textile materials, [g/m2] separately and jointly on the static coefficient of friction is.

Keywords: *static coefficient of friction, areal mass, sled load, two-factor analysis of variance*

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