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Interfacial kinetic ski friction

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2010 (English) Doctoral thesis, comprehensive summary (Other academic)

Abstract [en]

It is no doubt, that the ski glide over the snow is a very complicated object of research. However, ski glide is just a one area of many other areas of human knowledge. As a rule, the scientists and practitioners, who work in these areas, operate with some publicly expressed more or less solid hypotheses. These researchers work with one hypothesis until another and a better one comes up.

Our literature studies and our own observations regarding modern skis preparations, did not give us any solid hypotheses, which are able to explain the actual form and content of this procedure. The present work is an attempt to reveal

such hypotheses.

Conclusion: To achieve an optimal glide on skis with the base (the ski sole) made of some high hydrophobic durable polymer, e.g. UHMWPE, PTFE; we only have to create an adequate topography (texture) on the ski running surface,

adequate to the actual snow conditions.

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