ANNOTATION

The master's thesis consists of such sections as a list of abbreviations, an introduction, four chapters, conclusions, a list of used sources and appendices. The work contains 127 pages, 63 figures, 26 tables, 17 formulas and 20 sources.

The aim of the dissertation is the development of an automated rehabilitation tool for the lower limb to rehabilitate leg posture.

The relevance of this work lies in the development of a unique technical tool for independent rehabilitation in the modern context, in particular for today's Ukraine.

The object is a measuring automated system combined with a mobile application of a rehabilitation tool controlled by a microcontroller and an application.

The subject is an automated rehabilitation tool for the lower limb.

The review materials considered the historical context, the relevance of the topic, an overview of existing technical means, as well as separately considered means in the prevention and treatment of flat feet, an overview of film tensor resistors. The scientific and practical importance of the tool, research prospects are also considered.

In the design and construction department, a patent search was conducted, a basic and principled electrical circuit was developed, and formulas for calculating a tensor resistor and an elastic element were considered. A sketch of the tool was proposed and an experimental analysis was carried out.

In the section on the development of the startup project, a description and technological audit, analysis of the market opportunities of the startup was carried out. The cost was calculated, the team was selected, and the schedule and business model of the project implementation was developed.

Keywords: technical means, rehabilitation, flat feet, automation, strain gauge, electric circuit, diagnostic system.