

A summary of a doctoral dissertation

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FACULTY OF MECHANICAL ENGINEERING
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Title: METHOD OF ASSESING THE MODERNITY OF MACHINES FOR CARE GREEN AREAS ON THE EXAMPLE OF GARDEN MOWERS

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A method has been developed, as a tool to assist the process of assessing the modernity of machines for the care of green areas. This was achieved by a proper selection and hierarchisation of criteria and the construction of a mathematical apparatus to estimate the level of modernity of a tested technical device.

The research program included 79 lawn mowers. The age of the machine was divided into three age groups: - lawn mowers produced before 2005, - lawn mowers produced in the years 2005 – 2010 and – lawn mowers produced after 2010. Survey research was conducted throughout Poland. The questionnaire was addressed to users, sellers and servicemen of garden lawn mowers. The data collected was systematized according to a set of criteria and indicators that formed two subsystems: I – security, II – functionality. The final evaluation has an index characteristics, which is the result of a set of defined criteria from previously allocated subsystems. A universal solution has been obtained in the form of a modernity index W_N , that can be applied to any machines for the care of green, taking into account its specific characteristics. The dissertation has a practical aspect as a systematized algorithm for designers, sellers and users.

Keywords: method, indicator of modernity, machines for the care of green, lawn mower

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