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HORIZONTAL AXIS WIND MICROTURBINES WITH POWER OF 10 KW

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Abstract

Under the circumstances of the deficit in total energetic resources of the Republic of Moldova, non-traditional sources as wind, solar and hydraulic energies are very opportune. Concurrently with the conventional energy resources (fossil fuels, atomic energy etc.), wind energy begins to regain its positions not only from ecological, but also from economical point of view. Also, the wind energy conversion systems could play a significant role in the production of mechanical, electrical energy in the Republic of Moldova, in particular for providing the individual consumer with energy using wind turbines of low power (until 30 kW). In order to redress the situation of the energy sector, the Government of the Republic of Moldova, through the agency of the Supreme Council for Science and Technological Development (Academy of Sciences of Moldova), initiated several National Programs, addressing the elaboration of renewable energy conversion systems as well.
This paper describes some research and application of the industrial prototypes of horizontal axis wind microturbines with power of 10 kW, which include some new elements comparative to the already existing systems. These wind turbines are intended to be installed in different geographic areas of the Republic and tested. Some results are included in this paper.

Key words: blade, turbine, wind energy

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