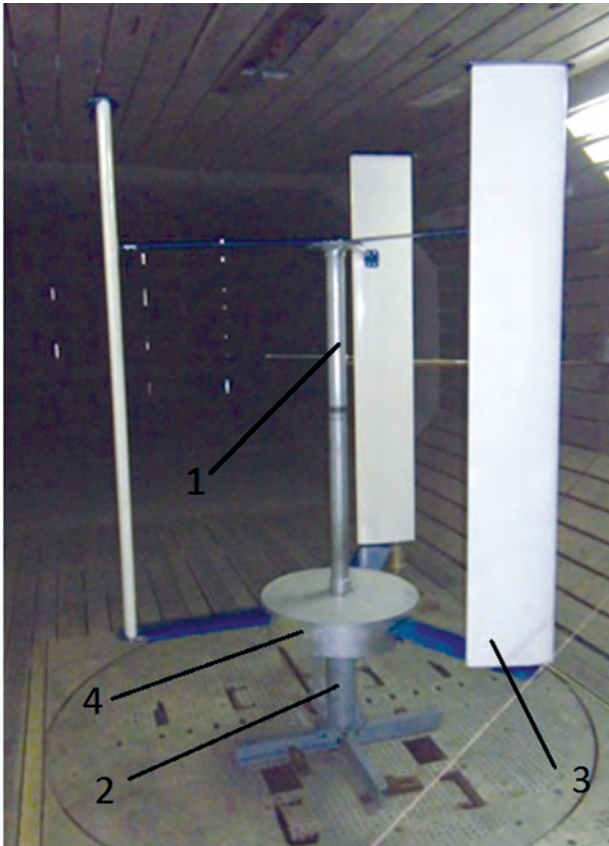


DARRIEUS-TYPE WIND ROTOR WITH STRAIGHT CONTROLLABLE BLADES FOR INDIVIDUAL WIND AND HYDRO POWER PLANTS



Darrieus-type wind rotor with straight controllable blades in the NAU Wind Tunnel. 1 – rotor spindle; 2 – support; 3 – carbon fiber blade (NACA0015 profile); 4 – blade control mechanism

Areas of Application

The plant is to be used for households, small industrial facilities and farms to convert the kinetic energy of wind and river flows into the mechanical energy of rotation

Specification

The plant is a wind (hydro) rotor with three straight blades and rotation axis. It has 3 blades with dimensions of 12.5×120 cm, rotor diameter of 1.5 m, and nominal capacity of 1 kW. The dimensions enlarge as the capacity increases up to 10 kW

Stage of Development.

Suggestions for Commercialization

IRL4, TRL5

Seeking partners for the power plant production; recommendations on plant siting are provided

Advantages

The automatic control of blades position during rotation provides 1.5 times increase in the rotor's capacity in comparison with the existing models

IPR Protection

IPR2, IPR3

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