

The invention relates to the wind power converting machines, namely to the wind turbines with Darrieus-type vertical axle.

The wind turbine with vertical axis comprises a vertical fixed tower (1), on which it is freely installed a rotary basic shaft (2) with blades (3) rigidly fixed thereto, each blade (3) having elongated spiral form and aerodynamic profile in the section perpendicular to the longitudinal axis. In the interblade space there are additionally placed at least two helical blades (8), fixed without clearance to an additional rotary shaft, placed coaxially to the rotary basic shaft (2) and joined with it by means of an overrunning clutch. The rotary basic shaft (2) is rigidly connected to the shaft of the electric generator (10). In the variants II and III the rotary basic shaft (2) and the additional rotary shaft are joined with the shaft of the electric generator (10) by means of a sinusoidal differential with balls or with conical gears.

The wind turbine with vertical axle permits to convert the wind power into electric or mechanical one with an increased conversion ratio.

Claims: 3

Fig.: 8

