

## The wind power station on a revolving or floating base

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Normal 0 21 **The wind power station on a revolving or floating base** Such a kind of a windmill has much better features than the windmills constructed in a traditional form. A big problem that the investors have to overcome during the construction of a wind power station is the matter of a safe foundation of a very high pole on which the propeller is suspended. Such a propeller often has a weight of a several dozen tons and the span of the blades is over 100 meters. The problem of the foundation does not end the list of the investor's problems. Such windmills seem to be ecological tools only apparently. The aerofoils profile of the propeller during the work of the windmill causes the formation of infrasounds. Within the band of these sounds there are also such sounds which are very harmful to biology.

These two problems of the investor which are the biggest ones do not occur during the construction of the windmill that I have constructed. My construction is additionally characterised by better features in many other aspects of the construction of a wind power station. First of all, the costs of the construction, i.e. of the propeller itself which in a traditional form requires the use of expensive technology. As regards this construction the propeller is replaced by a simple form of a turbine of which the blades are a kind of a scoop with no need to use a changeable angle. The cost is much lower and the time of work is much longer with no necessity of repairs. The turbine may have a big weight which is a favourable feature in this case as it creates an inertial wheel which increases the elasticity of the work of the turbine. The blades in the form of scoops do not cause sounds harmful to a man's ear and they are not a threat to the birds. The foundation and erection of the construction for such a windmill does not require the fulfillment of many terrain and technical conditions that are difficult to realize. It can be put even on a swamp and a light type of the truss structure does not require a permanent connection with the ground. If the materials for the construction of a windmill of this type are adequately prepared the time of the erection of the construction is very short and the costs are minimal in relation to the costs of the construction of traditional windmills. The outside walls of the whole truss structure that are built over cover all blades of the turbine except for those that are presently situated in the upper part of the construction. The stream of blowing wind is directed to this place which is being gathered from the wall directed at blowing. This wall has a big slope angle and it is automatically directed under the direction of the blowing wind thanks to an adequately constructed control fin. The windmill that has such a construction can work even during a very strong wind or even during a hurricane wind. An adequately constructed ramp directed at blowing allows to steer the amount of the wind that pushes on the blades. It is a very favourable feature of such a construction of the wall directed at blowing, not only because of the benefit that results from a constant time of work even when the wind is very strong but also because of the safety of the whole construction of the windmill. A wind storm will tighten such a wall to the basis but it will not turn the windmill over. If the weather is nice, when the blowing wind is too weak for a traditional windmill to work in an efficient way as a power station such a construction of the wall directed at blowing will gather at the top of the windmill a sufficient force of the wind for the effective work of the turbine. A floating form of the windmill has additionally other advantages for the investor. At the seaside and at the oceanside there are many places where the winds are often blowing. It is also easier to get a permission for the installation of a floating power station of which the construction allows for an appearance that is pleasant for natural environment. Such a feature is also important on the land, the appearance of the windmills that are being constructed at present is often the cause of conflict. © Andrzej and Magdalena Struscy.

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