

SYSTEM INTEGRATION OF VERTICAL AXIS WIND TURBINES ON BULDINGS

DESCRIPTION OF THE TECHNOLOGY

System for building integration of one or more plants of several vertical axis wind turbines which allow the generation of electricity from means wind energy.

The system of the invention comprises providing a construct with a prevailing wind facing the area, which in the invention is termed facade windward and leeward opposite facade called front facade. At least one plant of the building facade and its windward its leeward facade are open at least partially to allow the passage of wind, and in their manufacture aligned vertical axis

wind turbines are fixed in a row parallel to the front windward, and separated by partitions of wind flow tubes that determine current between the windward and leeward facade, which channel the air around it, so that the wind flowing through the plant drives the rotors of wind turbines vertical axis, while avoiding the turbulence generated by the operation of each wind turbine adjacent influence. The vertical axis wind turbines can be both trawl type (Savonius or similar) and lift (Darrieus or similar).

APLICACION BUSINESS SECTORS

Any type of construction and more particularly in buildings.

TECHNICAL ADVANTAGES AND BUSINESS BENEFITS

- Avoids interferences between the different turbines maneuver.
- Minimize noise generated by the operation of wind turbines, thereby facilitating its use in an urban environment and increasing safety in case of breakage.
- Installation of vertical axis wind turbines and standard buildings design so not limited to its cover, if not in plants dedicates totally or partially for this purpose, increasing the available power, and even opening the possibility to performing buildings dedicated to electricity generation from wind power exclusively.
- Safe operation due to these wind turbines are installed in the building, whose envelope protects against possible metal fragments to the outside, in case of accident.
- The protection of birds, thanks to the aforementioned envelope.
- Its efficient operation, due to a system for channeling airflow to each generator, avoiding interference between them.
- Quiet operation, to be able to use building envelope itself and ducts as shielding / sound absorbers.

CURRENT STATE OF THE TECHNOLOGY

Prototype.

INTELLECTUAL PROPERTY RIGHTS

The technology comes from research conducted through a project and belongs to the Institute for Energy Technology.

The technology is protected by patent: "Sistema de integración de aerogeneradores de eje vertical en construcciones". ES2397033.

COLLABORATION SOUGHT

Companies interested in the following forms of cooperation:

- Agreement patent license for implementation and use of technology.
- Agreement for the development of the R & D (TC) to complete the development of technology, or application to other sectors.

RELAGED IMÁGES



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