

PEM-Energy Oy and Telene launch innovative wind power on a household scale

Finnish high-tech company PEM-Energy has chosen Telene[®] for its new, small-scale MyPower[®] wind turbine

PEM-Energy Oy has a long history in green technology solutions. Founded in 1988, the Finnish company manufactures MyPower wind turbines and components for household and business use. "Generating your household energy by wind power can be a private response to climate change," says Mikael Seppälä, Managing Director of PEM-Energy Oy. "A wind turbine can generate energy for a house or summer cottage, even for a business, by arranging several turbines in a system. Our aim is to enable self-sufficient energy production without putting a load on the environment."



The turbine pays for itself in a relatively short time: three to seven years, depending on local wind conditions and the price of electricity. Wind power is also environmentally friendly. The turbine has a nominal output of 2 kW, a mast height of five meters and a turbine diameter of four meters. It generates about 5,000-12,000 kWh of energy a year and up to 15,000 kWh a year on windy shores.

Telene, for high performance

"Telene is our material of choice due to its excellent strength, resilience and durability" says Juhani Pylkkänen, Professor of Production Technology at the University of Oulu (north Finland), who participated in research and development for the windmill. "Compared with alternative materials, Telene has a better quality surface. It retains its shape well, lends itself to molding into integrated structural parts and withstands the test of time and difficult weather conditions better than other plastic materials. The difficult manufacturing process and high price of carbon fiber and similar materials restrict their usability, while aluminum and composite structures did not have the required tenacity in our tests," Pylkkänen concludes. Juhani Pylkkänen is delighted with the service orientation of the parts supplier: "Junkkari Muovi, who molds the windmill parts in Telene readily offered help in strength calculations and molding design. Their support also played a crucial role in the choice of material."

Telene, environmentally friendly

"Besides the specific advantage of Telene's closed mold process which allows reduction of COVs traditionally associated with GRP Hand-Lay-Up or Spray-Up processes, all Telene grades offer a favorable energy balance* when compared to several other materials: four times lower than for Polypropylene and ten times lower than for Polycarbonate," said Alexander Daemen, President of Telene SAS.

*The energy balance expresses the total energy consumed to produce a Telene part.

For more information on Telene, please visit www.telene.com. For more information on PEM-Energy, please visit www.pem-energy.com.

Telene SAS, a Rimtec Corporation company, develops and distributes Telene, a two-component DCPD (dicyclopentadiene) resins system, converted by the RIM (Reaction Injection Molding) process, and resulting in a high performance polymer. Its process and properties allow the formation of large, complex design parts that are resistant to hostile environments and cost-effective for small to medium series. Telene SAS headquarters, R&D center and sales office for EMEA are located in Drocourt, France. www.telene.com

Junkkari Muovi Oy is an expert in injection molding and mold manufacturing, offering injection- and reaction injection-molded plastic parts, from single products to part assemblies. Specialties include reaction injection molding in Finland from Telene, which offers several new possibilities. By offering a wide range of plastics technology resources, innovative raw materials and a high level of support, the company ensures that even the most challenging projects are handled successfully and on schedule. www.junkkarimuovi.fi