

Believe it or not...

it is in fact already **40 years** ago, that the wind power pioneer Sönke Siegfriedsen has built the first wind turbine with an aerodyn-**logo**



Erection of the first aerodyn construction on 7.7.1983 at Hof Springe in North-Germany (© S.Siegfriedsen)

Once upon a time...

At the beginning of the eighties: There were three engineers who believed the energy supply at that time with stinking and CO₂ producing coal-fired power plants and endlessly radiating nuclear power plants were not sustainable if we wanted to survive on our small planet in the long term. The three engineers, who come from the north German coast, acted, and founded a company. Their approach was clear: the use of wind energy has the best prerequisites to be an environmentally friendly, decentralized, inexhaustible, CO₂-free and technologically manageable solution for future sustainable energy production worldwide. Over a crate of beer, the company name was created - **aerodyn**, printed in small letters and italics. Sönke Siegfriedsen started his registered business on 1. July 1983.

The first turbine, sponsored by private funding and public state funds, had a rotor diameter of 15 meters and a generator output of 25 kilowatts. It was

very daring of us, who had just graduated from university, to design and calculate the turbine and to build most of it ourselves. The turbine was erected exactly on 7.7.1983 on the eco-farm Springe near Lübeck in northern Germany. Our first practical experience with the wind turbine consisted essentially of eliminating problems in almost all its individual parts - to be honest, this was sometimes quite frustrating, but giving up was simply not an option for us. In 1986 Sönke Siegfriedsen founded aerodyn Energiesysteme GmbH with the two partners F. Frank and R. Müller. In the following 27 years, under the management of Sönke Siegfriedsen as sole managing director and majority shareholder, aerodyn Energiesysteme GmbH was developed to a strong wind energy engineering company with international reputation.

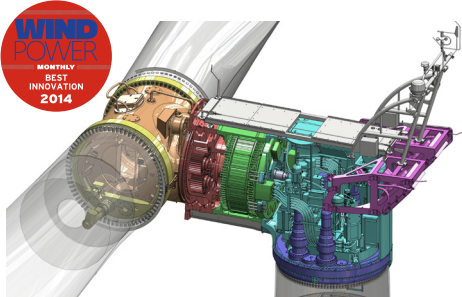
Another ten years of pioneering followed, with a lot of work and little bread. But we were able to

acquire extensive knowledge in the areas of load calculation, rotor blade design, machine construction, tower and foundation design and control technology at a very early stage. From 1992 onwards, the new grid feed-in regulations gave the first big boost to the demand for wind turbines in Germany. In the following ten years, aerodyn Energiesysteme GmbH was able to develop complete wind turbines or design individual important components for emerging wind power companies throughout Europe.

With the turn of the millennium, aerodyn Energiesysteme GmbH went out into the wide world. Among others, customers were won in Japan, South Korea, China, India and other countries who trusted in our competence. They commissioned aerodyn Energiesysteme GmbH to develop wind turbines with individual specifications in each case. Almost 30 types of wind turbines from 5 to

Breaking news

6,500 kW have been developed, with the result that approx. 50,000 of these turbine designs have been produced to date by the customers worldwide.



Parallel to these activities, Sönke Siegfriedsen founded aerodyn engineering gmbh in 1997 to manage his numerous inventions and the resulting patents and to develop and realize innovative concepts to push the boundaries of wind technology. Since the 1990s Sönke Siegfriedsen has applied for 58 patent families, which have been converted into 368 nationally granted patents. One of the most significant innovations was the concept of the medium-speed generator and a two-stage planetary gearbox. This groundbreaking innovation was first used in the Multibrid 5 MW offshore turbine built by Areva. Further developed into SCD-Technology, this design principle has been implemented in 8,340 turbines with a total capacity of 32,757 MW by the end of 2022. Not

without reason, Sönke Siegfriedsen has received various awards from renowned institutions for his manifold innovations.

For about ten years now, aerodyn engineering gmbh has been involved in floating offshore wind power technology. With the design of nezzy²-Technology, we have been able to take a significant step forward in being able to also operate floating wind turbines economically and design them for worldwide use. With nezzy², two wind turbines are erected on one concrete floating foundation

and can automatically track the wind direction. They are only connected to the seabed with a few anchors and can be installed at sea without any major environmental impact.

A prototype 16.6 MW turbine is currently being completed and will enter the water off the south coast of China before the end of 2023! The follow-up turbine will have a rated output of 20 MW. With only one nezzy²-system at a site in the North Sea providing enough electrical energy to adequately supply 25,600 households!



But don't worry: The end of the fairy tale is far from in sight. Many ideas are still waiting for their chance in the future. So it remains exciting, whatever may come. For us, for you.

Sönke Siegfriedsen



Testing of the 1:10 demonstrator of the nezzy²- 20 MW floating offshore wind turbine 2020

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