

# Press Release



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## Wind power in the upswing

- **Efficient manufacture of rotor blades with polyurethanes**
- **Covestro delivers first commercial order of raw materials to China**
- **Efficient Pasquick® coating technology provides protection**

Power generation from renewable sources is a key part of the sustainability concept of [Covestro](#) and underlines its commitment to achieving the UN Sustainable Development Goals, in particular goal number 7 for renewable energy (UN-SDG 7). This applies above all to wind power, which is one of the most promising renewable energy sources due to its global availability and the technical progress already made.

This is also reflected in the development of wind power capacity, which is seeing double-digit annual growth across the globe. China is the world's largest wind power market with 221 GW of installed capacity at the end of 2018, according to the World Wind Energy Association.<sup>1</sup>

### Concept for cost-efficient production of rotor blades

However, cost-efficient processes for manufacturing wind power plants are in greater demand than ever to enable further expansion and for competing with traditional energy resources. Once in operation, the aim is for turbines to be used over a lengthy period with the lowest possible maintenance requirements.

In order to meet this challenge, Covestro has joined forces with partners and developed a polyurethane (PU) resin and a manufacturing technology, which – in conjunction with glass fiber mats and an efficient production process – enables shorter cycle times. “This is a clear cost advantage for manufacturers,” says Dirk Soontjens, who coordinates the global wind power activities of Covestro. “Its advantage over epoxy resins used so far is that it flows more

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<sup>1</sup> <https://wwindea.org/blog/2019/02/25/wind-power-capacity-worldwide-reaches-600-gw-539-gw-added-in-2018/>



easily and ensures better wetting of the glass fiber mats used for reinforcement.” The resin also exhibits very good mechanical properties and meets many regulatory and industry performance standards.

### **Progress in China and Europe**

Only recently, Covestro has processed the first commercial order for utilization of the PU resin for production of eighteen wind rotor blades with a length of 59.5 meters each, together with the respective spar caps and shear webs, all manufactured by Zhuzhou Times New Material Technology (TMT), one of the largest wind blade manufacturers in China. The blades were delivered to [Envision](#), a leading global wind turbine technology company, and are scheduled to be installed in a wind farm in Eastern China in July 2019.

Also in Europe, Covestro collaborates with leading players of the wind power industry and intends to commercialize its technology shortly. Besides that, Covestro operates a new wind power laboratory in Leverkusen, which expands its global lab capacities in Asia and Europe to support customers and innovation.

### **High performance coatings with higher productivity**

Covestro has also developed coating solutions with higher cost efficiency. For instance, protective coatings based on Pasquick<sup>®</sup> technology for steel towers as well as gel coatings for blades of wind power plants significantly increase productivity and ensure a long lasting performance without maintenance. This is due to the fact that the use of Pasquick<sup>®</sup> requires one layer less than conventional corrosion protection and that the coatings have a lower curing time.

Besides that, waterborne topcoats based on Bayhydur<sup>®</sup> and Bayhydrol<sup>®</sup> provide long-lasting performance with low solvent emissions. Last but not least, Covestro also offers leading edge protection for rotor blades based on products of the Desmodur<sup>®</sup> line, providing long lasting protection against abrasion.

### **About Covestro:**

With 2018 sales of EUR 14.6 billion, Covestro is among the world’s largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and employs approximately 16,800 people (calculated as full-time equivalents) at the end of 2018.



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