

OperationsNews

Issue 3/2022

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Witaj, Polsko! ENERTRAG Operation expands activities in Poland

ENERTRAG Operation – or as it is called in Poland: ENERTRAG Eksploatacja – is not only at work for you in Germany. Particularly in other European countries, the company has recently expanded its presence and activities. One focus country: Poland.

Operations management in Poland picked up speed in 2022

As part of its operations management, ENERTRAG Operation monitors a total of 59 plants located in Poland from the remote monitoring center in Dauerthal. The last of these plants were added in August 2022. In addition to 24/7 remote monitoring, walk downs are part of the agreed services for this portfolio. For this reason, two teams were in Poland for a total of two weeks as recently as the beginning of September to carry out the necessary walk downs.

"For us, monitoring plants that are not located in Germany is not a problem," explains **Andreas Grüning**, Head of Operations Monitoring at ENERTRAG Operation. He adds, "In this particular case, it's especially easy for us: since the 59 plants are all monitored in the Powersystem software solution developed by ENERTRAG,



the underlying processes are more or less identical to German plants for us." Communication with the operators or other trades usually takes place in English. This is part of the standard repertoire for colleagues in the operations monitoring department.

Inspection body with 59 "acceptance-checks after commissioning" since November 2021

The inspection body of ENERTRAG Operation also expanded its activities in Poland last →



2023: It will be exciting

At the end of the year, it's hard to avoid looking back: In the music app, on TV, on social networks, people are sharing what 2022 was like. We don't want to completely avoid this either. That's why, in this issue of our OperationsNews, we take a look back at our recent activities in neighboring Poland, among other things. However, a large part of this issue is dedicated to looking ahead. From 2023 on we will be offering new services, the drone inspection is gaining further momentum, and new colleagues are enriching the company with new impulses.

I look forward to a new year with you, and for now I hope you enjoy reading this issue!

Michael Dahm
Managing Director

year. The inspectors focused in particular on *acceptance-checks after commissioning*: Since November 2021, the teams have carried out a total of 59 of these – for the above mentioned turbines that ENERTRAG Operation also manages in terms of operations monitoring. In this case, the turbine types were Vestas V126, Siemens-Gamesa SG126 and SiemensGamesa SG132.

Of course, ENERTRAG Operation also offers other inspection services for all common types of turbines, as **Matthes Schachtner**, Head of Technical Services at ENERTRAG Operation, emphasizes: "We offer all our inspections in Poland, from inspections of the machine to rotor blade inspections or inspections of the powertrain. However, our drone inspection in particular presents itself almost naturally to international operations – especially in the license model, so that the inspections can be carried out independently by the operator."

Not least, the geographical location of the company makes it easy for the colleagues at ENERTRAG Operation to work in Poland. With the headquarters of ENERTRAG Operation in Dauerthal, the Polish border is almost in the neighborhood: It is less than 50 kilometers to Szczecin by the shortest route. This makes operations in the west of

the neighboring country in particular not only uncomplicated, but also attractive from an economic point of view.

Conclusion: Whether in Germany, Poland or other European countries: With ENERTRAG Operation you always rely on a competent partner.

Wind energy in Poland: Industry clearly lags behind Germany

With an area of just over 312,000 km², Poland is only slightly smaller than Germany, which is ahead with just under 360,000 km² – with a comparatively much lower population density (123 inhabitants/km² compared to 233 inhabitants/km²). But even though the basic conditions for wind energy in Poland seem to be good, as free spaces are available, the neighbor from the east is clearly behind Germany in terms of development. In 2021, for example, 15.1 TWh of wind power were generated in Poland. This compares with 113.6 TWh of electricity generated from wind energy in Germany. (Quelle: windbranche.de).

Just in 2022, ENERTRAG inaugurated its own project in Poland (**Dunowo project, wind fields in Dargikowo and Karlino**) with the aforementioned 59 wind turbines and made a noticeable contribution to the

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We offer all our inspections in Poland, from inspections of the machine to rotor blade inspections or inspections of the powertrain. However, our drone inspection in particular presents itself almost naturally to international operations ||

Matthes Schachtner,
Head of Technical Services
ENERTRAG Operation

expansion of wind energy with one of the largest wind projects in the country. In addition, ENERTRAG and leading Polish telecommunications provider Orange Polska have agreed on a long-term PPA to supply the company's infrastructure with climate-neutral electricity from a 36 MW onshore wind farm being developed and built by ENERTRAG as an extension of the Dunowo project.

Read more about it in our [press release](#).

Here you can find more background information on the wind energy branch in [Germany](#) and [Poland](#).



ENERTRAG inaugurates 186 MW Dunowo wind project in Poland. From left to right: **Christoph Sowa** (ENERTRAG, Head of Department Poland), **Jörg Müller** (ENERTRAG, Chairman of the Supervisory Board), **Jacek Smolinski** (Wójt/Mayor of the rural municipality Białogard), **Waldemar Misko** (Mayor Karlino), **Robert Falana** (Mayor of Tychowo), **Georg Kerschensteiner** (Allianz).

SHORT NEWS

The most important news of ENERTRAG Operation at a glance!

From 2023: ENERTRAG operation also offers safety checks

The Technical Services department of ENERTRAG Operation is expanding its service portfolio with safety inspections from 2023. Newly offered are: **Expertise tests** (incl. fixed ladder, fall arrester, crane system, rescue equipment, first aid kit, fire extinguisher, anchor points, PSAG, optionally with or without service lift) and so-called **ZÜS tests on service lifts** as well as associated **repair work** that may be necessary. A team of 6 employees makes sure that everything runs smoothly. "The safety inspections are a logical extension of our services and I am pleased that Nico Toll and his team are with us," **Matthes Schachtner**, Head of Technical Services at ENERTRAG Operation, says.

More info in our [press release](#). (only in German)



Everything for your safety: safety inspections complement service portfolio

Plan now, relax later: Inspection planning 2023 is on the agenda

The year 2022 is coming to an end. And with the turn of the year, wind turbine operators are once again faced with the questions: Which inspections do I need for my turbines next year? When do I need them? And how can I avoid long downtimes and yield losses?

ENERTRAG Operation is there to help you with these questions. Thanks to our broad repertoire of services, we can offer you a wide range of services from a single



source. This has a doubly positive effect: Optimized inspection planning leads to precise route planning, the lowest possible downtimes and, last but not least, attractive conditions.

Feel free to contact us for your non-binding offer:

Anne Sommer, Christian Weil, David Müller
+49 39854 6459-200
betrieb@enertrag.com

New to the team: Andre Reichert joins ENERTRAG Operation as new Head of Operational Services



Since October, we have been pleased to welcome **Andre Reichert** at ENERTRAG Operation. Andre is on board as Head of Operational Services

and thus responsible for operations management and monitoring. "The first weeks at ENERTRAG Operation were very exciting," Andre reports. "I think that the cooperation in the department has settled quickly and well and I am looking forward to further optimizing our services for our customers," he adds. The most important topics for him:

1.) Customer orientation – as the department operating services, we are the "caretakers". We look after customer plants as if they were our own. Availability must be optimized and the focus must be on improving performance

2.) Creating added value by further development – ENERTRAG offers many opportunities to bundle topics with its own large portfolio of plants. Customers benefit from entrusting their plants to a large full-service provider.

3.) Integration of complementary RE systems – PV, H2, battery storage: The operating services benefit from the fact that ENERTRAG thinks along with these topics from the development stage on and that we were able to gain experience with the technologies at an early stage."

ENERTRAG Operation offers drone inspection in France by 2023



For several months now, customers of ENERTRAG Operation have been able to get the drone inspection – rotor blade inspection incl. LPS measurement by drone – developed together with Sulzer & Schmid Laboratories as a service (especially in Germany) or in a license model for their fleet.

New in 2023: ENERTRAG Operation is also on the road for its customers in France - under the flag of ENERTRAG Exploitation - with its own specially trained teams and offers drone inspection as a service.

More info in our [press release](#).

"Predictive maintenance": The key to optimized operation

Tracking blade damage progression to enable predictive maintenance can generate huge savings and increase annual energy production

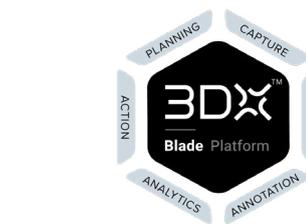
A GUEST ARTICLE BY OUR COOPERATION PARTNER SULZER & SCHMID

About the author: **Marc Hoffmann**, Global Head of Sales & Marketing at Sulzer Schmid, joined Sulzer & Schmid in 2020. He is a passionate driver of digitalization for OEMs, wind farm operators and industry suppliers alike.

Wind energy is one of the fastest growing renewable energy technologies. Over the last decades, the global installed wind energy generation capacity has increased drastically from 7.5 GW in 1997 to 823 GW in 2021¹. Last year alone, 92 GW of new capacity was added, of which 20 GW was offshore and this expansion is set to continue over the next decades. However, maintenance of wind turbines remains an important cost factor, and one that is likely to increase as the development of larger wind turbines, together with the maintenance of aging fleets, lead to increased repair requirements. So, what savings can be made to lower repair costs and

increase annual energy production (AEP)? A recent report² showed that onshore wind farm operators spent around USD 15 billion on operations and maintenance services in 2019, 57% of which was on unplanned repairs. An analysis of wind turbine blade failure revealed that two of the most observed damage mechanisms were structural cracks and surface damages. These are damages that can be identified with visual inspection at an early stage.

With the 3DX™ Blade Platform, Sulzer Schmid provides a tool for processing, reviewing, and analyzing visual inspection data of rotor blades – which is collected during every **drone inspection** that is carried out by **ENERTRAG Operation**. Thanks to a special damage progression feature, it is possible to identify damages at an early stage and predict their evo-



“*Understanding customer needs and adapting our solution package to meet these needs is guiding everything we do. Together with our customers, we have developed a number of solutions over the years, and we will continue to do so.*”

Marc Hoffmann,
Global Head of Sales & Marketing
Sulzer & Schmid Laboratories AG

lution. The result: early intervention to repair damages before they become serious, reducing repair costs, downtime and optimizing AEP.

A data-driven approach to decision making

The 3DX™ Blade Platform is flexible, modular, and scalable to meet the evolving needs of customers. It can manage different kinds of inspection data and use the customer's unique taxonomy to link seamlessly with their existing processes and systems. It facilitates access to both historical and current data, enabling a smooth annotation workflow. Intelligent analysis of the data, using a large range of AI-enhanced functionalities, can provide a dynamic insight into failure rates and damage propagation that can be used to make informed decisions. →

¹ IRENA Wind Energy Statistics 2022

² Root Causes and Mechanisms of Failure of Wind Turbine Blades: Overview Leon Mishnaevsky, Jr.



Structural cracks and surface damages can be easily detected during a drone inspection

The new Damage Progression module with a special damage ID component, enables customers to monitor a damage and compare it with data acquired over the years. With this feature, the evolution of damages such as leading-edge erosion can be tracked in a so-called "damage chain" and displayed in a time series of recorded inspections. Knowing how damages develop over time allows blade experts to determine which damages need to be repaired now, in 6 months, or later. This significantly improves the planning and efficiency of repair campaigns.

Prevention is better than reparation

Leading-edge erosion, for example, can become an issue after only 2 years of turbine operation. This type of surface damage increases the drag coefficient, which in turn leads to a reduction in AEP of up to 5%. When combined with fatigue, it is also one of the major causes of rotor blade failure. Customers typically repair damages categorized with a high severity level. But repairing damages before they reach this level of severity, means they not only lower the cost of repairs, they can also restore the turbine AEP and prevent a certain number of rotor blade failures.

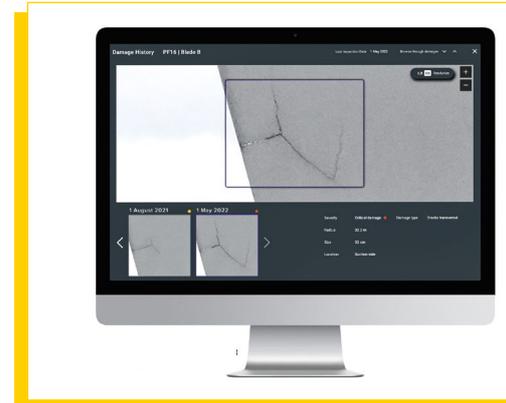
Sulzer Schmid's 3DX™ Blade Platform is an asset management tool that enables OEM, Owners and Operators to make informed decisions about their assets in a way that fits with their processes, strategy and am-

bitions. The platform provides transparency, which allows customers to work more efficiently both within their organization and with partners. The deep link function means that information relating to specific damages can easily be shared, enabling repair companies to provide reliable quotes, and facilitating discussions with customers, insurance companies or any other parties.

Monitoring wind assets now easier and more efficient

Understanding customer needs and adapting the solution package to meet these needs is guiding all developments at Sulzer Schmid. As a result, together with customers a number of solutions have been developed over the years.

Lightning strikes, for example, are one of the main causes of rotor blade damage; in cooperation with ENERTRAG Operation, Sulzer Schmid recently launched a new feature which combines LPS and rotor blade inspections in one flight and incorporates the data into the 3DX™ Blade Platform. Another recent development is Sulzer Schmid's module for thermal inspections to validate the proper functioning of the de-icing system. Thanks to the 3DX™ Blade Platform, not least in combination with the data collected during a drone inspection offered by ENERTRAG Operation, monitoring wind assets has become easier and more efficient than ever, ultimately lowering the cost of renewable energy.



3DX™ Damage Progression: Damage changed from severity 3 to severity 5 in 9 months

➤ **Read more about about predictive blade maintenance in the full article by Marc Hoffmann**

You would like to have some first-hand information? Contact our experts:

Sulzer & Schmid Laboratories AG Marc Hoffmann

Global Head of Sales & Marketing
+49 (0) 173 2778281
marc.hoffmann@sulzerschmid.com

ENERTRAG Operation

David Müller
Head of Sales
+49 (0) 39854 6459 – 200
betrieb@enertrag.com

About Sulzer & Schmid

Sulzer Schmid is at the forefront of innovation in the energy service sector. Its rotor blade inspection process employs autonomous drones to capture high-quality and consistent images. The cloud-based 3DX™ Blade Platform offers a data driven approach, incorporating AI-enhanced analytics, providing customers with actionable insights to optimize performance of renewable energy assets.

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Imprint:

ENERTRAG Betrieb GmbH | Gut Dauerthal | 17291 Dauerthal | Office: Eddesser Str. 8 | 31234 Edemissen
Phone +49 (0) 39854 6459 200 | Mail: betrieb@enertrag.com | betrieb.enertrag.com

Trade register: Neuruppin HRB 9293 | Managing directors: Matthias König, Michael Dahm
VAT identification number DE814477632

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