

Press Release

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ENGLISH

Bachmann Partnership with P.E. Concepts Maximizes Turbine Lifetime Extension LTE

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Onshore turbines are aging – in Germany, 30% of installed plants are over 16 years old. Operators must plan to extend operation within good time, but Lifetime Extension (LTE) assessments are usually conservative and based on estimates - often missing out on the full potential operational lifetime that remains even after design lifetime has expired.

With a combined experience of almost 40 years in the wind industry, CMS provider Bachmann Monitoring GmbH and engineering consultancy P.E. Concepts GmbH have set out to change that. Through the partnership, Bachmann systems deliver highly accurate Structural Health Monitoring (SHM) measurements that optimize the analytical LTE assessment performed by P.E. Concepts. This often leads to a longer period of extended lifetime for wind turbines and a dramatic impact on total ROI.

A smart and cost-effective SHM retrofit solution, comprising robust sensor hardware, state-of-the-art automation and custom-built software, enables Bachmann to provide high-accuracy load and Eigenfrequency measurements. These measurements help P.E. Concepts calculate remaining useful lifetime much more accurately than traditional SCADA data and wind information. "With Bachmann's data, we can significantly improve the theoretical calculation models and reduce uncertainty – often leading to a much higher remaining useful lifetime for our clients," says Matthias Saathoff from P. E. Concepts.

Furthermore, an analytical assessment based on measurement data supports the period of life extension with continuous monitoring, facilitating the optimal use of components with corresponding remaining service life potential. Owners and operators have complete access to all SHM data, allowing for better planning when it comes to economic decision-making during the extension period.

"When it comes to ensuring optimal Lifetime Extension, the use of Structural Health Monitoring data simply makes sense," says Marc Thomsen, Product Manager at Bachmann. "A measurement-based analytical assessment of remaining service life often leads to an extension period that is significantly longer than the conservative estimates from traditional assessments. When it comes to ROI, owners of older or smaller WTGs have almost got to go for a smart SHM retrofit solution."



Pictures

Picture 1:

Lifetime Extension applies to both offshore and onshore wind parks, but onshore turbines are often missing data from structural monitoring.

Picture 2:

Bachmann provides highly accurate Structural Health Monitoring measurements that optimize Lifetime Extension. This shows a Bachmann service team assembling an acceleration sensor.

All pictures: Bachmann

For more information, please visit:

[https://www.bachmann.info/en/campus/performance/innovation/lifetime-extension?mtm_campaign=LTE&mtm_kwd=EN&mtm_source=Andere\(extern\)&mtm_medium=organisch&mtm_content=Veröffentlichungen&mtm_cid=2023-09&mtm_group=BAE&mtm_placement=Drittpartei](https://www.bachmann.info/en/campus/performance/innovation/lifetime-extension?mtm_campaign=LTE&mtm_kwd=EN&mtm_source=Andere(extern)&mtm_medium=organisch&mtm_content=Veröffentlichungen&mtm_cid=2023-09&mtm_group=BAE&mtm_placement=Drittpartei)

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Bachmann Monitoring GmbH

Bachmann Monitoring GmbH is a 100% subsidiary of Bachmann electronic GmbH and the competence center for Condition Monitoring within the Bachmann Group. Based in Rudolstadt, Germany, we offer fully certified solutions for Condition and Structural Health Monitoring - from hardware and software, remote monitoring, reporting and service, to accredited training and development.

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