

## THE CHALLENGE

# Eliminating reliance on steel cable guides for wind turbine gearbox monitoring systems

A success story.



## Boosting efficiency with smarter solutions

In the competitive wind energy industry, turbine manufacturers face constant pressure to enhance efficiency and reduce cost. One critical area is condition monitoring of key components, such as gearboxes in the drive train. Traditionally, the monitoring system's wire harnesses are secured using welded, hot-dip galvanised steel cable guides. However, these cable guides come with several challenges: they are costly, prone to quality control issues, and difficult to install.



## A streamline approach for lower cost and greater consistency

A wind project customer approached us with a request to find a more efficient solution to reduce their dependence on the growing number of different steel cable guides needed for various gearbox models. The existing process of drilling holes in the gearbox housing to secure the guides was also time-consuming and carried a significant risk of damage from over-drilling. Additionally, these holes weakened the housing structure. This inherently slowed down production and increased the need for rigorous quality inspections.

## THE SOLUTION

# Cable tie mounts for adhesive use

Engineering innovation at its best

*“Our specially designed cable tie mount, applied using a two-component adhesive, allows the condition monitoring wiring harness to be attached directly to the gearbox housing, regardless of the type or manufacturer. This innovation makes the entire production chain more flexible and efficient, while eliminating the risks associated with drilling.”*

**Artur Hofer**  
Product Manager  
Cable ties and fixings at HellermannTyton



The adhesive mount installation process is straightforward. The two-component adhesive is applied to the mount using an applicator, which is then easily positioned at the desired location. The mount's design is highly adaptable, with tolerance for various surface types, including rough or curved areas, allowing for easy placement across nearly any part of the gearbox. This flexibility ensures that the condition monitoring harness can be routed precisely to the appropriate sensor locations.

By selecting the appropriate adhesive formulation, curing times are typically between 5 to 20 minutes, giving installers plenty of time to apply all the mounts. Once cured, the harness can be quickly secured using cable ties and tensioning tools, streamlining the entire installation process.

[▶ To the product!](#)

## OUR RESULT

# Reducing complexity in production processes

Streamlining cable routing  
for greater efficiency



A further benefit of the adhesive mounts is the reduction in variance. Since the mounts can be universally applied, production complexity has been significantly reduced. This improvement led to fewer line stoppages and more stable production. Overall, the introduction of adhesive mounts optimised the entire wind turbine manufacturing process.

Manufacturers experienced lower costs, improved production efficiency and significantly better resource utilisation. This demonstrates how innovative solutions like PMB adhesive cable mounts can not only cut expenses but also enhance the sustainability and effectiveness of the entire production chain.



### Get in touch!

Contact our wind industry field expert Georg Neureiter and drive your project forward with innovative solutions by HellermannTyton.



### Wind Energy Hub

Please visit our website for further information and more topics for the wind industry field.