



# OPTIMIZING RESOURCES ENSURES UNIFORM QUALITY

FOR THE WIND TURBINE INDUSTRY

**MORE  
CLEANING  
WITH LESS  
MANUAL  
HANDLING**

**A WATER-BASED  
SOLUTION ...  
NO  
SOLVENTS USED**

**PINK  
GEL**  
READY FOR USE AND  
EASY TO REMOVE

*“ZF Wind Power is dedicated to standardizing ALL of our fluids  
– to a uniform high level of quality”*

*Jean-Pierre Huyberechts  
Consultant Materials Technology, ZF Wind Power*



**DST-CHEMICALS®**  
PURE PERFORMANCE

BUSINESS CASE

# OPTIMIZING RESOURCES ENSURES UNIFORM QUALITY FOR THE WIND TURBINE INDUSTRY

ZF Wind Power puts wind turbines in motion. ZF Wind Power supplies gearboxes for the world's leading wind turbine producers. But when the gears of the gearbox are not completely clean, it becomes a problem for the subsequent processes. Together, ZF Wind Power and DST-CHEMICALS have refined Pink Gel as an efficient detergent for wind turbine gearboxes. But why the colour pink?

DST-CHEMICALS® and ZF Wind Power developed, tested and optimised the Pink Gel product in collaboration in 2018. Jens Lorentzen, Technical Process Specialist, and Pernille Simonsen, Chemical Engineer, describe the challenges, development efforts and collaboration involved the solution – and the result.

Jean-Pierre Huyberegts (ZF Wind Power):

*“ZF is dedicated to standardising ALL of our fluids – to a uniform high level of quality. This will allow us to guarantee the same and the best results to our customers, every time. Whether the gearbox is produced in the US, China, India or Belgium. That’s why DST-CHEMICALS is a key partner.”*

## OPTIMIZING POOR WASH QUALITY

ZF Wind Power had daily problems with poor wash quality and results after using a different detergent. The gearboxes were not absolutely clean. Moreover, the subsequent manual cleaning took an unnecessarily long time. ZF Wind Power and DST-CHEMICALS A/S have worked together as partners for many years and have developed several products which is why ZF Wind Power contacted DST-CHEMICALS A/S in Denmark: would DST-CHEMICALS be able to help develop and optimise Pink Gel?

Pink Gel is a manual detergent sprayed on the part to be cleaned. Afterwards it is rinsed out. The parts still pink are the nooks and crannies to be finished with manual cleaning, Jens Lorentzen says. When ZF Wind Power produces gearboxes, lots of parts have to be spotless before proceeding in the processing.

## READY FOR USE AND EASY TO REMOVE

ZF Wind Power had very specific requirements for the abilities and appearance of the detergent. Pernille Simonsen has developed and optimised Pink Gel together with ZF Wind Power.

Through a wide range of testing in both Lommel (Belgium) and Kolding (DST HQ, Denmark), we found an optimum solution. Adding the colour pink to the detergent makes it easier for the staff to see which areas require cleaning and where cleaning is insufficient. At the same time, the product also had to be ready for use and to be able to be applied and removed quickly. Studying the product's composition, we have managed to find a good solution.

Pink Gel has been developed and tested in various processes and then applied – at first in Lommel, Belgium and now globally at ZF Wind Power.

## MORE GEARBOXES WITH LESS MANUAL HANDLING

Pink Gel is applied using a hand sprayer, and after 10-15 min., one man can easily remove Pink Gel and apply a water based corrosion inhibitor (DST-PAS/1).

Rather than using three hours to process one gearbox – and take up space – ZF Wind Power is now able to handle six gearboxes at a time. Just one man – without using any solvents, Jens Lorentzen says.

## CO-CREATION AND INNOVATIVE SOLUTIONS

- Total cleaning and degreasing of metal parts on wind turbine gearboxes
- Preparation for additional processing – lacquer or paint
- Water based solution – no solvents used
- Saves resources – both manpower and time
- Standardising fluids – and quality – globally

**Want to prevent rust on metal parts for good?**  
Read more about DST-PAS

**Visit ZF Wind Power:**  
[www.zf.com/products/en/wind/home/wind.html](http://www.zf.com/products/en/wind/home/wind.html)



**DST-CHEMICALS®**  
PURE PERFORMANCE