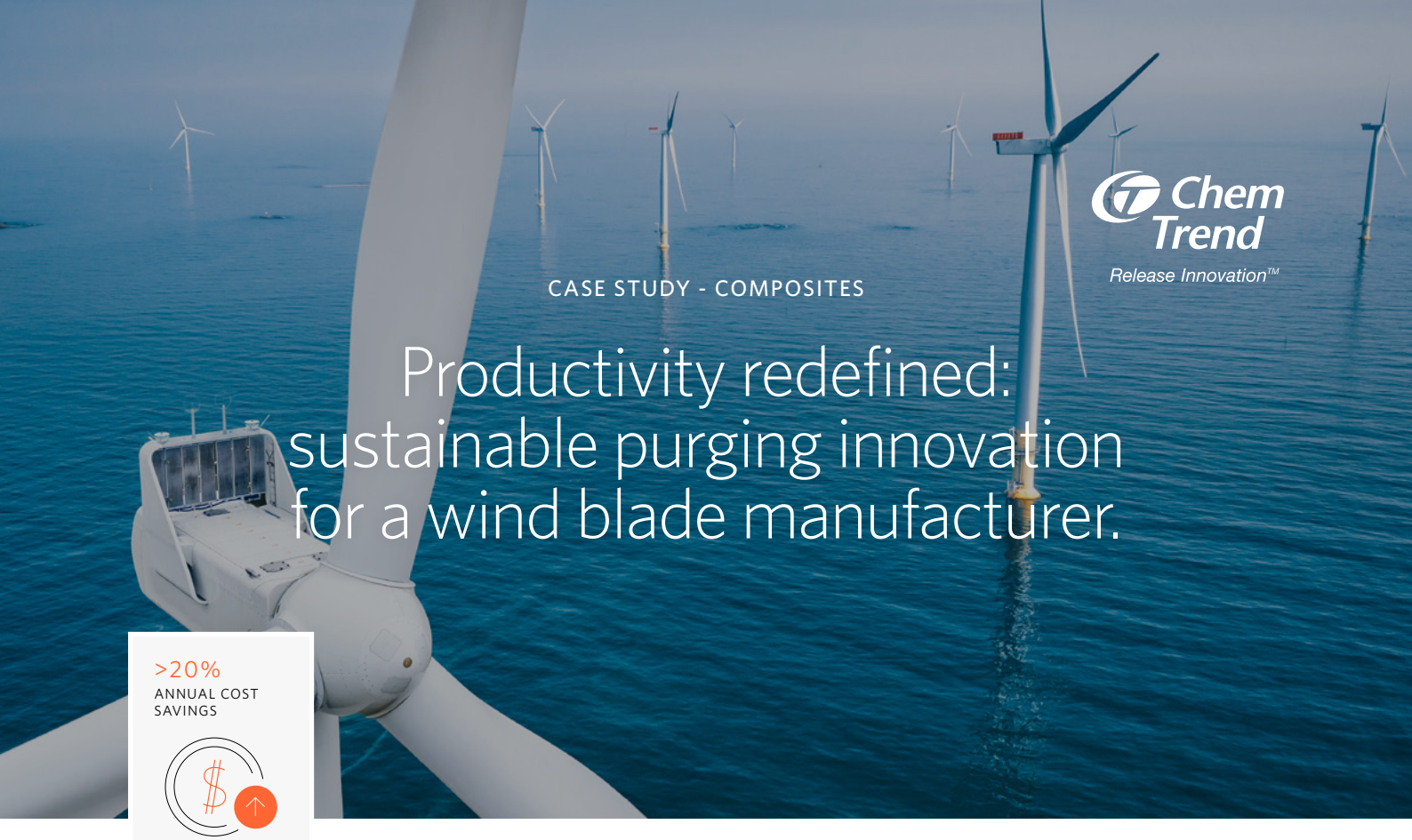

Chem Trend
Release Innovation™

CASE STUDY - COMPOSITES

Productivity redefined: sustainable purging innovation for a wind blade manufacturer.

>20%
ANNUAL COST SAVINGS

97%
DROP IN VOC EMISSIONS

720 Kg
REDUCTION IN PRODUCT USAGE

WHAT WE ACHIEVED.

A large wind blade manufacturing facility was facing the persistent challenge of detachable flange sticking during the molding process. This issue led to mold damage, excessive manpower requirements, and other complications related to solvent usage. By transitioning to a newly developed water-based solution, the facility eliminated flange sticking, reduced operator involvement by half, and extended mold life. The change delivered significant annual cost savings while reducing volatile organic compound (VOC) emissions by up to 97% — the equivalent of nearly five tons of CO_2 reduction each year. In addition to financial and environmental benefits, the facility achieved safer working conditions and improved air quality.

HOW WE GOT THERE.

We began with a detailed study of the production line, which revealed the root causes of inefficiencies: frequent use of sharp tools, mold damage, and high operator involvement. Internal collaboration with research and development teams led to the creation of a customized water-based release solution that addressed corrosion concerns. Structured trials were then conducted, starting with small-scale evaluations that progressed to full production runs. These trials confirmed that the new solution was easy to apply, eliminated health hazards, and allowed smooth demolding without damaging molds. The facility's leadership and process teams worked closely with Chem-Trend throughout the transition, ensuring that the solution was fully validated before adoption.

OUR SOLUTION.

The water-based release system introduced for detachable flange applications provided a safer, more efficient, and environmentally conscious alternative to solvent-based methods. It reduced application time from four hours to two hours per blade, halved the number of operators required, and eliminated recurring mold rework costs. By combining corrosion resistance with user-friendly applications, the solution not only solved the immediate operational challenge but also aligned with broader, longer-term sustainability goals.

HANDPRINT IMPACT.

At Chem-Trend, we pride ourselves on our long history of sustainability efforts. However, it is our effect on our customers' processes that provides the greatest impact. It goes beyond our global Footprint; it is our even wider Handprint.

Here, we achieved the following:

- Emissions drastically reduced with a water-based solution
- Material usage optimized by extending mold life, eliminating rework, and reducing product use
- Waste reduced by eliminating mold rework

Emissions Materials Waste

For more information about our composites capabilities, our innovations, or other stories, visit CHEMTREND.COM