

Media Release

Voith Paper

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Innovative pulping concept from Voith ensures significant reduction of energy demand and CO₂ emissions at Palm

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- The specific pulping energy of the new technology is more than 30% lower than in conventional dissolution systems
- The highly innovative pulping technology is already being used profitably as a pilot project at the German paper manufacturer Palm
- The development of new innovations is part of the "Papermaking for Life" sustainability program

AALEN/HEIDENHEIM. As part of the sustainability program "Papermaking for Life," Voith has set the goal of supporting a 90 percent recycling rate by 2030 through new fiber streams and an optimized recycling process. For this purpose the leading full-line supplier is continuously developing its existing product portfolio. In parallel, Voith is working on new, disruptive innovations that completely rethink the current papermaking process. One example is an innovative pulping concept that reduces energy consumption by more than 30 percent compared to conventional systems. In particular it is designed for pulping special raw materials.

At the German paper manufacturer Papierfabrik Palm, Voith's highly innovative pulping technology is already in profitable operation as a pilot project. The stock preparation system is designed for a production of 500 tons per day and enables the company to save 1,000 MWh of energy per year. In addition, high accept consistencies are possible, which leads to advantages in the downstream process steps.

Stephan Gruber, Chief Technology Officer at Palm, is impressed by the new solution: "Voith's innovative stock preparation system has started up very well. Thanks to Voith's tailor-made concept, expertise and professional support, we were able to achieve and even exceed the performance targets within a very short time. In the area of sustainability,

the technology takes a top position and is a good tool to further increase our resource efficiency and achieve our goals."

Voith's intensive preparatory work with a test prototype has thus paid off. The technical solution behind the optimized recycling process links two pulping technologies. The new pulping concept involves continuous HC pulping in a trough with horizontal pulping shaft and downstream screening section. At Palm, it is installed in a separate line for pulping processing scrap and reject rolls and is already in continuous operation. The pulping of standard raw materials with increased dirt loads has already been successfully tested. Here, too, the system has been able to demonstrate its advantages.

The new concept is a good example of how Voith puts special emphasis on sustainability in all projects and pursues the highest standards. This is confirmed by Wolfgang Mannes, Voith's Senior Expert R&D Fiber Processes, who was significantly involved in the development of the concept. "Our products are leading in the industry and enable the most sustainable paper production," says Mannes. "The new pulping concept demonstrates our high innovative strength. We always go one step ahead so that our customers can produce paper with lowest energy, water and fiber costs. In various load tests at Palm, we had very positive experiences with the pulping result and the robustness of the concept. The specific pulping energy is also more than 30% lower than in conventional dissolution systems – a big step towards improved sustainability."

"In the light of limited raw material availability and challenging sustainability targets of the entire paper industry, we are already seeing clear interest from the market," summarizes Steffen Bassmann, Director Product Management Fiber Systems at Voith Paper. "Palm's results are promising. We are further optimizing the concept, especially with regard to its use for difficult-to-dissolve and coated recovered paper grades, for which mostly discontinuous HC pulpers are used today."

Papermaking for Life sustainability program

As part of the "Papermaking for Life" innovation and development offensive, Voith Paper is presenting versatile technologies and initiatives that lead to more efficient and sustainable processes in papermaking. The focus is on water, energy and fiber savings as well as digitalization, innovations and partnerships as levers for more sustainable production. Another focus is on Voith's own activities at its locations worldwide.

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Learn more about Voith Paper's innovations in the area of sustainability:
voith.com/papermaking-for-life/innovation.

About the Voith Group

The Voith Group is a global technology company. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, paper, raw materials and transport & automotive. Founded in 1867, the company today has around 20,000 employees, sales of € 4.3 billion and locations in over 60 countries worldwide and is thus one of the larger family-owned companies in Europe.

The Group Division Voith Paper is part of the Voith Group. As the full-line supplier to the paper industry, it provides the largest range of technologies, services and products on the market and offers paper manufacturers holistic solutions from a single source. The company's continuous stream of innovations facilitates resource-conserving production and helps customers minimize their carbon footprint. With its leading automation products and digitalization solutions from the Papermaking 4.0 portfolio, Voith offers its customers state-of-the-art digital technologies to improve plant availability and efficiency for all sections of the production process.

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As part of the "Papermaking for Life" sustainability program, Voith has set itself the goal of supporting a 90 percent recycling rate by 2030 through new fiber streams and an optimized recycling process.

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