

HIGHER AND HIGHER

EXPANDING THE LIMITS OF WHITE LIQUOR PLANTS

With the latest H family products for the white liquor plant now available, pulp mill operators can turn ANDRITZ's innovation into advantage. LimeWhite-H™ white liquor disc filter, LimeFlash-H™ feed head system and LimeDry-H™ lime mud drying system enable higher capacity and higher efficiency, elevating overall plant performance.

The pressures are great in the pulp industry to make sure every part of the mill is running to its maximum capacity and efficiency. The white liquor plant is a key area in terms of its effect on overall mill performance, which is why ANDRITZ experts have worked hard on identifying components of the plant that can be fundamentally improved. The ANDRITZ H family of products – with the H standing for “higher” – enables mills to improve productivity and fulfill environmental requirements for the entire lifecycle of white liquor plants.

Xiaoning Li, Senior Sales Manager, White Liquor Plant, ANDRITZ, says, “At ANDRITZ, we’re more than just a supplier—we’re the trusted partner. As industry leaders, we’re committed to true collaboration, offering expertise and dedicated support every step of the way. With the H family of products, we are the only company in the pulp industry that is offering next-generation processes that enable operators of white liquor plants to increase capacity, optimize

efficiency, increase availability, and dramatically improve overall performance.”

LIMEWHITE-H WHITE LIQUOR DISC FILTER

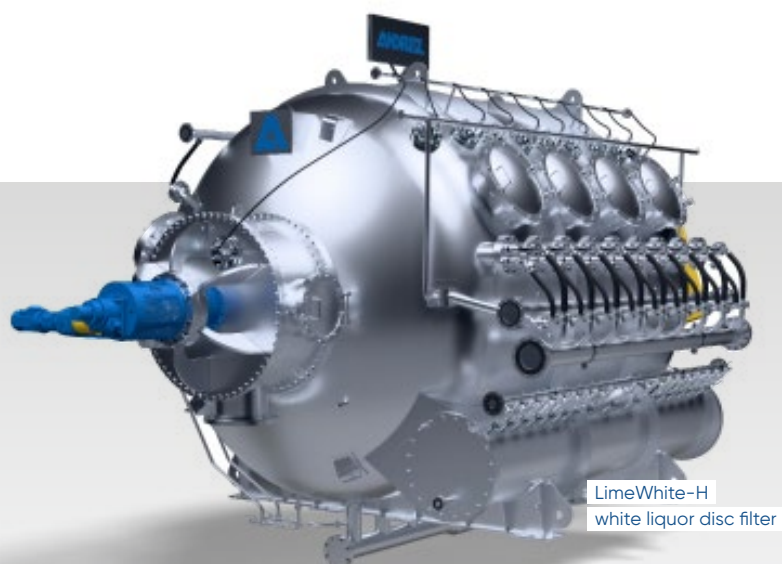
LimeWhite-H is a completely remodelled version of the existing LimeWhite filter. Major benefits include lower investment cost, increased capacity, and a smaller footprint. LimeWhite-H has undergone some important new technical advances including center shaft axial movement, a hollow shaft, a fixed scraper, and a higher vat level.

The remodelled technology comprises of a pressurized disc filter, which performs both white liquor filtration and lime mud washing. High discharged mud solids makes it an ideal selection for mills with tight water balances. The filters provide the best white liquor quality with high availability.

Advantages of the LimeWhite-H:

- The boosted capacity of the LimeWhite-H is more than 40% of the LimeWhite filter
- Continuous operation
- Clean and hot white liquor
- Fully automated
- Higher white liquor yield
- Reduction in water circulation
- Less white liquor dilution

Teemu Häkkinen, Project Manager, ANDRITZ says, “Together with our customers we have looked at the possibilities of improving the filter, particularly when it comes to efficient operation as well as increased capacity. We have also worked on having a smaller footprint of the filter, which gives flexibility in regard to mill layout in order to meet our customers’ expectations and demands.”



LimeWhite-H
white liquor disc filter

ANDRITZ has a number of references of successful LimeWhite-H operations in the industry including the first installation at Metsä Group's Äänekoski mill in Finland.

LIMEFLASH-H FEED HEAD SYSTEM

Significant enhancements have been made to the LimeFlash solution through the introduction of LimeFlash-H, a next-generation feed head system designed for pulp producers.

The system is a completely new feed end technology in the industry for maximizing efficiencies of the lime kiln. The main focus of the technology is on further increasing the capacity of lime kilns at the same time as reducing energy consumption – and all without the usual large capital investment.

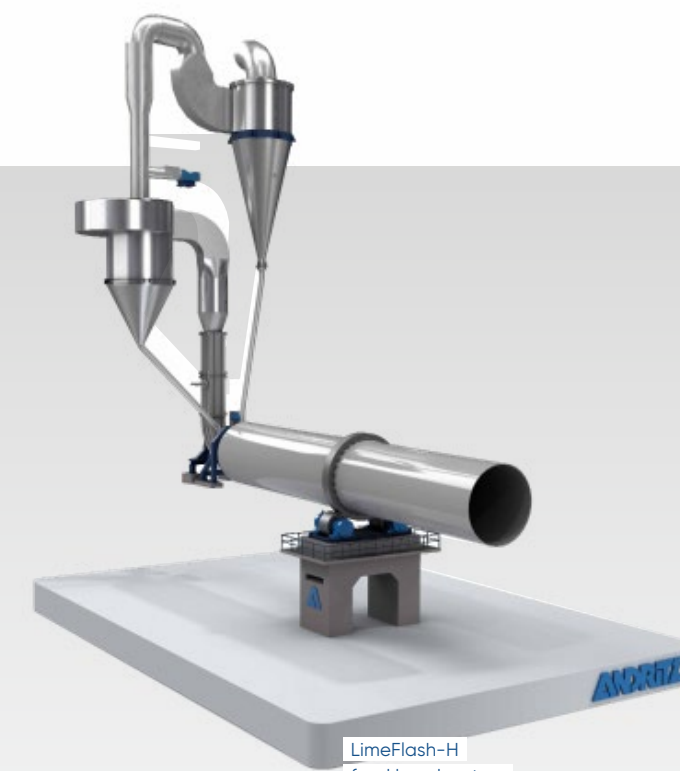
Specific energy consumption is decreased by recovering flue gas heat into preheated lime mud. It also gives the potential to run the same size kiln with a higher production, by using a two-cyclone system.

Advantages of the LimeFlash-H:

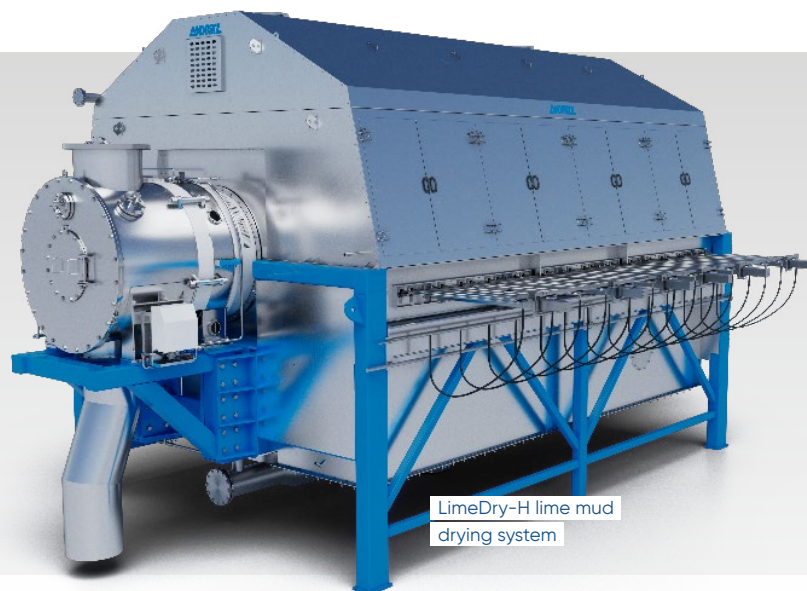
- Significantly higher capacity increase when compared to the original LimeFlash solution
- Highly efficient and environmentally friendly heat recovery system
- Enables operating at high feed head temperatures
- Flexibility to operate lime kiln with different process conditions
- Excellent availability and minimum maintenance cost
- Major investment savings for both equipment and civil works
- Applicable for both new lime kilns, and for increasing the capacity of existing kilns

“As LimeFlash has evolved over time, we have seen clear opportunities for more gains by applying the latest technology developed for LimeFlash-H, for instance, increasing capacity of the lime kiln by as much as 40% at the same time as decreasing energy consumption in the lime kiln. All this is achieved without major, expensive modifications to the existing kiln shell,” says Mika Kottila, Head of Technology, White Liquor Plant, ANDRITZ.

Successful references of LimeFlash-H operating at pulp mills include: Papelera Guipuzcoana de Zicuñaga, Spain and Liansheng Pulp & Paper, China.



LimeFlash-H
feed head system



LimeDry-H lime mud drying system

LIMEDRY-H LIME MUD DRYING SYSTEM

ANDRITZ has made significant improvements to its LimeDry mud drying system. Utilizing some of the proven concepts featured on the latest LimeWhite-H white liquor disc filter, for example, the implementation of center shaft axial movement, a hollow shaft, and fixed scraper – similar, tailored principles have been applied to the LimeDry-H lime mud drying system.

The end result is a more simplified vat construction and stable feeding system, providing increased homogenous lime mud that enables less swinging of temperatures in the flue gases of the lime kiln and, ultimately, savings in energy.

The new system comes with a smaller footprint, which saves space and investment costs, as well as an updated design, which improves maintenance access and provides a safer working environment.

Advantages of the LimeDry-H:

- Better, more stable running of lime mud feeding
- A simplified system
- Reduced footprint
- Reduced investment cost

Mika Mussalo, Head of Product Management, White Liquor Plant, ANDRITZ says, "An additional development applied to LimeDry-H is the introduction of a new feature in which the separation of filtrate and gas takes place in the hollow shaft. This alleviates the need for the usual large vacuum tank, while increasing capacity by up to 8%, and also reducing the footprint by 30%.

Trusted by industry leaders, LimeDry-H has a proven track record of success.

As demonstrated by the new features applied to the H product family, ANDRITZ experts have concentrated on pulp and paper customers' main demands of safety, cost, efficiency, and ease of operations, which ultimately enable peace of mind for operators.

CONTACT
Xiaoning Li
xiaoning.li@andritz.com

BE READY FOR THE FUTURE AND GO BEYOND WHITE LIQUOR

Turn our innovation into your advantage. With decades of experience and hundreds of references, ANDRITZ is the leading technology and solution provider for white liquor plants globally. With ANDRITZ you can maximize your productivity and fulfill your responsibility requirements for the entire life cycle of your white liquor plant.

Discover more!



DUO POWER-C

ANDRITZ'S AIR SYSTEM CONFIGURATION

ANDRITZ has developed a revolutionary approach to reducing energy consumption and emissions by controlling the Yankee hood air system operation mode in tissue and MG paper plants.



Tissue and MG paper machines are designed to produce at their top capacity, known as the dry limit of the system. However, when running with lower basis weights, the required dryness capacity is much lower, which is why a more flexible drying process can be beneficial to improve operating parameters like temperature and blowing speed across different production modes.

ANDRITZ has been granted a patent for its new "DUO POWER-C" air system configuration that helps to control the process air flows in hoods for tissue and MG paper drying. DUO POWER-C combines conventional duo-systems (wet end and dry end drying) with combo systems (wet end drying and dry end suction) and is therefore able to work flexibly according to production needs. ANDRITZ experts have developed this breakthrough system configuration for hoods heated by gas, syngas, hydrogen, or even electricity.

This comprehensive method for controlling the air system operation mode can be applied to both new and existing tissue machines and is equally applicable to MG paper machines.

COUNTING THE REWARD IN ENERGY AND EMISSIONS

Greater energy efficiency and lower emissions are the reward for implementing the solution. They reduce costs, including taxation on CO₂ emissions in many countries, and ensure that the environmental impact of the process is minimized.

ANDRITZ's patented "DUO POWER-C" solution for controlling the air system operation mode in tissue plants represents a significant, low-risk advancement in tissue drying technology. It offers flexibility, energy efficiency, and emission reduction, making it a valuable solution with the ability to benefit tissue and MG paper manufacturers worldwide.

Read the complete story online!



CONTACT
Marco Cattani
marco.cattani@andritz.com

ANDRITZ PrimeLine™ tissue machine focuses on sustainable and energy efficiency solutions, such as our "DUO POWER-C" air system configuration.

