AT TECHTEXTIL 2024, ANDRITZ WILL FOCUS ON TEXTILE RECYCLING AND DURABLE NONWOVEN PRODUCTION TECHNOLOGIES

International technology group ANDRITZ will be presenting its innovative nonwovens production and textile solutions at Techtextil in Frankfurt, Germany, from April 23 to 26 (hall 12, booth B93).

The broad ANDRITZ Nonwoven & Textile product portfolio covers state-of-the-art nonwovens and textile production technologies, such as air-through bonding, airlay, airlaid, needlepunch, spunlace, spunbond, wetlaid/Wetlace™, converting, textile finishing, recycling, and natural fiber processing. For Techtextil, a special emphasis will be placed on technologies for textile sorting and recycling, bast fiber processing, needlepunch, airlay, wetlaid for technical fibers, and life-cycle service.

TEXTILE SORTING, RECYCLING, AND NATURAL FIBER TECHNOLOGIES

ANDRITZ has always been a pioneer in providing industrially and economically viable solutions that bring the circular economy to the world of textile fibers. Thus, ANDRITZ is not only a reliable supplier but also a knowledge provider. The company offers everything from automated textile sorting and textile fiber preparation to mechanical and chemical recycling and combined processes..

The latest development in the textile recycling area is the automated textile sorting process. This process is the result of an ambitious partnership between textile recycling company Nouvelles Fibres Textiles, waste sorting specialist Pellenc ST, and international technology group ANDRITZ, a specialist in textile recycling machinery and processes. Capable of automatically sorting garments by composition and color, the line meets the needs of both post-consumer and post-industrial waste markets. The line also removes hard parts such as buttons and zippers to prepare the material for further processing in an ANDRITZ tearing machine. The automated textile sorting line can process textile waste to produce recycled fibers for the spinning, nonwovens, and composites industries.

In addition, ANDRITZ is specifically focusing on processing ecofriendly bast fibers such as hemp, kenaf, jute, and others. The company offers sophisticated solutions for decorticating bast fiber straw for further cottonizing and respinning processes. It is the ideal starting point for manufacturing products made from natural fibers, which proactively help to reduce plastic components and thus protect the environment.

CUTTING-EDGE SOLUTIONS FOR DURABLE APPLICATIONS

Another special focus area at Techtextil will be technologies for durable nonwovens. ANDRITZ offers comprehensive processes in this market segment, such as needlepunch, airlay, and wetlaid. For all these processes ANDRITZ has dedicated technical centers, where customers are welcome to conduct trials and develop new products.

One highlight in the needlepunch sector is the new neXloom Elliptica-type DF-4 needleloom. This machine makes it possible to process very lightweight nonwovens of 40 gsm at high-speed

(>25 m/min) while at the same time ensuring that visual quality is given top priority. Available in large widths, it provides optimized pre-needling consolidation to ensure an even visual appearance by reducing the drafting ratio by 30 to 50% in a first needleloom when producing very light felts. This needleloom is thus the preferred equipment when quality aspects of high-grade, low-weight fabrics are important as there is no fabric delamination in the needling phase. ANDRITZ oil-lubrication technology in combination with the renowned ANDRITZ needleloom frame reduces maintenance and extends the service life thanks to a compact, simple, and reliable design.

In order to ensure a safe production process, the elliptical movement and related parts included in the ANDRITZ housing are completely protected. neXloom Elliptica-type DF-4 needleloom's ability to adjust the advance stroke set-up during operations is surely another differentiating asset on the market. Accordingly, it is the perfect pre-needling solution for demanding markets such as automotive, paper felts, spunbond products, and also synthetic leather regarding an improved product quality & uniformity.

Moreover, airlay technology also plays a major role in durable nonwovens, such as in the automotive industry, building insulation, carpet underfelt, the mattress industry, and furniture applications. This process includes blending, fine opening, the airlay process, and finally mat consolidation, by needling, thermobonding, a combination of the two, and spunlacing. It allows customers to process all types of fibers from virgin, recycled fibers to non-fiber particles such as foam, shredder paper, and straw. This technology can guarantee homogeneity and mat regularity for a large range of weights from 300 to 1,200 gsm. The airlay has optional 3D web forming equipment capable of producing multiple density web that is mostly adapted for the automotive industry.

In addition, ANDRITZ wetlaid technology can efficiently process technical fibers such as carbon, metal, aramid, glass, and micro glass fibers or fiber blends for technical applications in the transportation, aerospace, hydrogen, battery, fitration, or construction industries. These types of fibers require gentle and customized treatment in the forming process. For this reason, ANDRITZ develops tailor-made wetlaid production lines for technical fibers and products, including a dedicated forming process.

RETROFIT AND UPGRADES FOR NONWOVEN LINES

Nonwovens producers require state-of-the-art equipment to meet ever-increasing market demands, optimize their energy use, achieve product differentiation for their nonwovens production lines, and/or enhance product quality. ANDRITZ therefore offers retrofits and upgrades of existing lines. Due to its large number of installed lines and decades of experience in all segments of nonwovens production technologies, ANDRITZ has the necessary expertise to recommend and offer the right retrofits and/or upgrades for existing lines. Customers also have the opportunity to conduct trials in ANDRITZ's state-of-the-art technical centers to test the latest equipment and performance levels.

The entire ANDRITZ Nonwoven & Textile team is looking forward to welcoming customers and partners at booth B93 in hall 12.



ANDRITZ textile sorting line



ANDRITZ elliptical type needleloom



ANDRITZ neXformer aXcess for technical fibers