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Press Release

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World premiere : IBA's Rhodotron® will strongly reduce pollution and cost in the production of Viscose (Rayon) for the clothing industry.

Ion Beam Applications s.a. (IBA) of Louvain-la-Neuve, Belgium is pleased to announce the start up of the world's first electron beam facility specially designed to process pulp sheets in large quantities for the international viscose (rayon) industry. The facility is owned and operated by Ristron GmbH & Co. K.G, Elektronenbehandlungsservice, a subsidiary of August Ristelhueber GmbH of Hamburg, Germany.

Robert Zlousic, Vice-President, of the new facility in Saal, Germany, said "This new facility is the only one of its type in the world, and is expected to draw the strong attention of the international viscose industry to implement electron treated pulp into their processes."

The heart of the facility is the Rhodotron® TT300 industrial electron accelerator manufactured and installed by IBA. "The Rhodotron has made this major advance in the viscose industry possible", said Joern Meissner, IBA Project Manager in Saal. "The Rhodotron has a processing rate several times greater than any other high energy industrial accelerator currently available, thus making this process economical for the first time. More importantly, its record for reliability and stability, with 7 systems now installed or on order, meets or exceeds the demanding requirements of a major industry like the viscose industry."

In the traditional viscose process, sheets of pulp (typically 60 cm x 80 cm x 1 mm thick) are broken down by caustic soda and then dissolved in carbon disulfide to produce a thick liquid called viscose. The viscose is then precipitated with acid and spun in continuous fibres that are used in a number of applications, including absorbency and stuffing materials, and rayon cloth.

In the new process, originally developed several years ago by Filmfabriken Wolfen of Germany, the pulp sheets are first treated with ionizing energy from an electron accelerator. This partially depolymerizes the cellulose molecules that make up the pulp, and also makes it more susceptible to further processing by the chemicals used in the process. The net result is a significant reduction in the amount of chemicals, up to 40% of carbon disulfide in some cases. Not only does this reduce chemical costs accordingly, but it also reduces the amount of these chemicals discharged to the environment.

For some viscose mills, this reduction in chemical discharges can mean the difference between having to shut down a mill for environmental reasons, or being allowed to continue operating with the cleaner process that uses the electron treated pulp.

Many experts in the viscose industry believe that the electron process is the biggest improvement in its more than 90-year history, and may be a critical factor in its long-term viability.

Axel Winter, President of August Ristelhueber said "The installation and commissioning of the Rhodotron accelerator by IBA took place on schedule, and the facility is now ready for commercial use by the viscose industry. The Rhodotron is the only machine in the world that can treat pulp at the production rates and economies demanded by the viscose industry."

There are more than 130 viscose mills around the world that can make use of this process. These plants process over 3 million tonnes of wood pulp annually to fabricate products valued in excess of several billion dollars. IBA will be working with many of them to assist them in their implementation of this process for their mills, either by using multi-purpose service centres like Ristron's in other parts of the world, or installing dedicated Rhodotron facilities on their own plant sites.

Pierre Mottet, CEO of IBA said "The electron treatment of pulp represents one of many exciting new industrial applications for the Rhodotron. The implementation of the Ristron facility in Saal is a clear demonstration of IBA's commitment and ability to meet the electron accelerator requirements for several industries in the future."

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