

ANOTHER OPPORTUNITY FOR VALUE ADDED PRODUCTS AT PULP MILLS

ANDRITZ is once again providing opportunities for pulp producers to increase the range of added value bio-products in their product portfolios with its A-ConCrystal™ continuous technology for microcrystalline cellulose (MCC) production. There is still an increasing demand for the use of MCC in several fields of applications, strengthening the position of being one of the fastest growing areas in the use of specialty celluloses.

MCC was first developed in the 1950s for use in pharmaceutical applications, including adhesives and filler agents for pills and tablets. Now there is also a growing demand for MCC use in food applications such as rheology modifiers as a source of fiber and a bulk agent. It is also in demand for industrial applications including use in rheology modifiers, oil drilling aid agents, and cosmetics. The global annual MCC production rate is around 190,000 tonnes and is growing at a rate of around 5% per year.

Up until now, the production of MCC has been an expensive process, restricting the use of the product despite growing demand. However, the A-ConCrystal™ continuous technology from ANDRITZ has addressed the high cost, now allowing more efficient, high production of MCC with equipment integrated into pulp mills instead of small, separate batch production units. The technology has lower water and chemical consumption with a reduced carbon footprint and broader product range.

SEVERAL ADVANTAGES OVER TRADITIONAL MCC PRODUCTION

The raw material for producing MCC can be either dissolving or paper-grade pulp. To make MCC, cellulose is purified and partially depolymerized, which is obtained by treating alpha-cellulose with mineral acids. ANDRITZ A-ConCrystal™ continuous technology has several advantages over traditional MCC production. Its unique integration into an existing pulp mill

makes high MCC production capacities possible with low capital and operational expenses. Integration of the technology provides a platform that is self-sufficient and by-products can be generated in the manufacturing process that can be used to produce other bio-based products.

Microcrystalline cellulose manufactured with A-ConCrystal™ continuous technology has been proven to fulfill the USP/EU Pharmacopeia and European Union EFSA requirements.

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A-ConCrystal™ continuous technology for microcrystalline cellulose production



A-ConCrystal™ continuous technology for microcrystalline cellulose production complements ANDRITZ's Advanced series product portfolio with a comprehensive unique production method for microcrystalline cellulose.

Earlier known as the Aaltocell™ technology, which was developed together with Aalto University, the A-ConCrystal™ technology takes one more step forward as being the first continuous manufacturing process for MCC with a complete solution for every step of the whole process, standing out from the conventional batch production technology with several benefits.

