NEW BUSINESS UPDATE

Nanocellulose plant is testing first products

At the beginning of this year, we reported on the opening of Sappi's pilot plant at the Brightlands Chemelot Campus in the Netherlands. The plant is a key step in developing Sappi's new nanocellulose business. We caught up with Math Jennekens, Sappi Europe's R&D Director, to see how things were progressing.

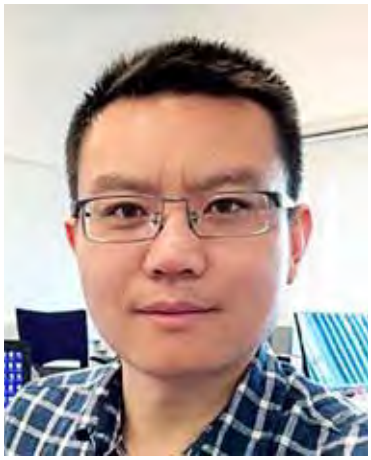
What is the plant currently producing?
Production of our nanofibres is a two-phase plan. We have started the first phase, where we produce a wet gel, the quality of which is already comparable to competing products. Three colleagues, Saschi Momin, Marco Maes and Ger Boots are currently working to improve the product, and will keep going until we reach its full potential. In parallel, Seda Cantekin and Lixian Xu are identifying applications for the product. Reseachers at the universities of Maastricht and Leuven are currently looking into which nanocellulose best fits which applications (as different applications need different fibres – e.g. beech fibres will provide different properties from eucalyptus fibres).

Are these applications a secret or can you tell us about them?
One of the first applications being tested is for superplasticizers (also known as high-range water reducers) in concrete. The product is already being tested as a stiffener for paper and board.

What happens in the second phase?
In Phase II, we will make the size distribution of the nanofibres even smaller. And we will turn the wet gel into a dry and fully redispersible product. The equipment required for this has been designed and ordered by Ad Jansen (CT&E) and is about to arrive. We should kick-off Phase II in the first quarter of the new business year. By January we want to produce a redispersible product of consistently high quality.

And when will Sappi's nanofibres hit the market?
We cannot tell that yet. A stable process producing a consistently high-quality grade is the first step. As soon as we take that step, we will develop a number of products and processes in cooperation with external partners.

As we move on, we will define and refine a realistic business case for Sappi to build a large-scale manufacturing plant. This process is ongoing, in close cooperation with Matt Spence, New Business Development at Sappi Ltd.



NEW TALENT AT R&D

Lixian Xu has recently joined the R&D team. His role is to focus on technical new business development for nanocellulose

With Phase I of the pilot plant for nanocellulose now in operation, development of various applications and identifying the right partners to enable this is of utmost importance. Lixian will, therefore, closely cooperate with Matt Spence, New Business Development at Sappi Ltd, and Seda Cantekin, senior Technology Engineer at R&D, who is active in developing applications for nanocellulose.

Lixian holds a PhD and an MSc degree in chemical and thermal engineering at Beijing University of Technology, and has gained deep specialised know-how in bio-based process development and the valorisation of cellulose-based bio products. He has been actively involved in different projects, involving hemicellulose and cellulose hydrolysis and dissolution, fluid catalytic cracking and biomass conversion processes, and has a proven track record in identifying applications for cellulose-derived products.

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