



Borregaard

CUSTOMER STORIES

# BORRESPERSE<sup>®</sup> PAPER FOR LIGHTWEIGHTING AT SIZE AND FILM PRESS

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# BORRESPERSE PAPER FOR LIGHTWEIGHTING AT SIZE PRESS

## BACKGROUND & OBJECTIVE

In this market, paper is sold by quality, not by weight. High-quality fibres are often imported, so cost savings on fibres is highly relevant for the paper mill. The objective of the customer was to keep strength characteristics while producing as light a paper as possible.

## TRIAL CONDITIONS

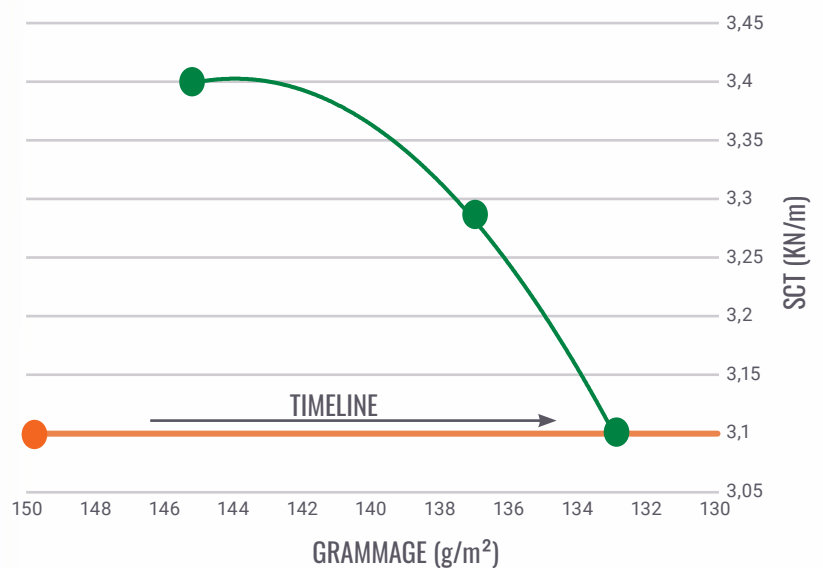
The machine was a size press working at a speed of around 300 m/min, using enzyme cooked starch. The initial starting weight was 150g/m<sup>2</sup>, and the main strength parameter to focus on was SCT.

Borresperse Paper was applied together with starch which increased the solids in the size press solution. However, the viscosity did not increase, and the pond was calm. It was determined that the dosage of enzyme could be lowered enabling the use of a more effective starch.

As Borresperse Paper was added, the total dry pick-up increased with the solids at the pond. Both SCT & CMT increased from the initial grammage. Then the grammage decreased step by step, focusing on the SCT, the critical parameter for the customer. Consequently, the PM speed improved.

## RESULTS AND CONCLUSIONS

As the following graph shows, the objective value of strength in SCT, initially established for 150g/m<sup>2</sup>, was obtained with 133g/m<sup>2</sup> paper. **The basic weight reduction was 11% and the speed increased by 10%.** With the pond working with higher solids, and thereby, less water to evaporate after the size press **energy savings at the post-drying section added to these positive results.** With the addition of Borresperse Paper, the CMT of the 133g/m<sup>2</sup> was higher than the typical CMT value for the 150g/m<sup>2</sup> grammage.



[Click here](#) for more information about how to use **Borresperse Paper**



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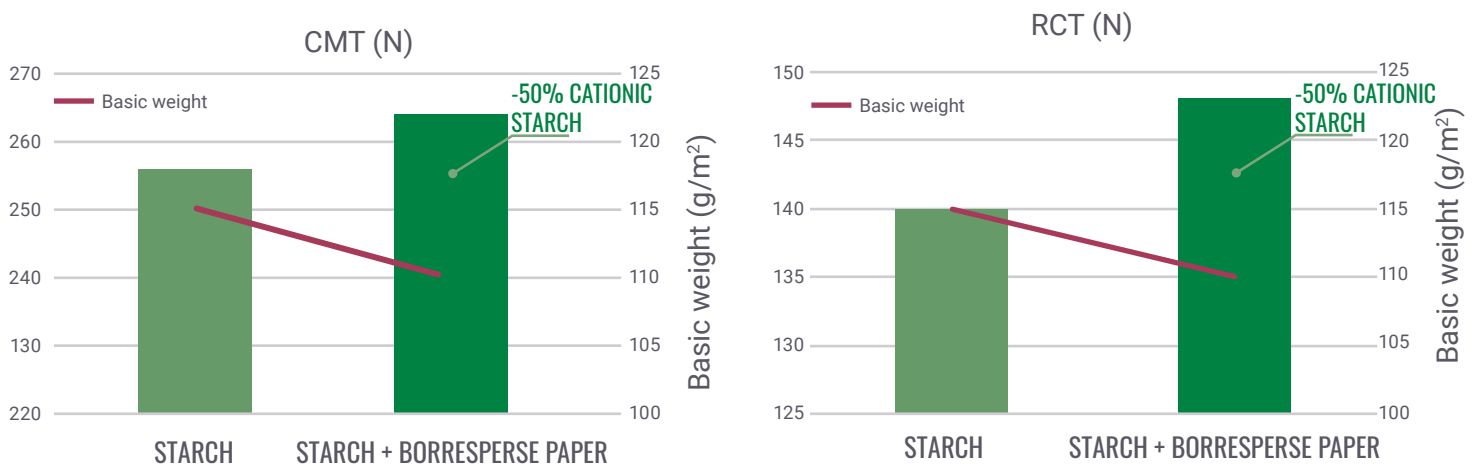
A paper factory contacted us to get support for process optimization to enhance certain technical and economic values. Borresperse Paper was tested and applied primarily for extended production runs to optimize the chemical mix of additives, and secondly, to optimize fibre consumption while achieving the same paper strength. All possible technological factors influencing the optimal run of the machine were re-set and tested.

## TRIAL CONDITIONS

The mill produced 115 g/m<sup>2</sup> grade with starch and wet-end cationic starch. The strength properties met the specification but reduced basic weight and savings were desirable.

## RESULTS & CONCLUSIONS

Borresperse Paper was tested to deliver lightweighting on 115 g/m<sup>2</sup> paper. Results shown in the charts.



With Borresperse Paper, lightweighting of 4 g/m<sup>2</sup> was feasible with 50% savings in cationic starch addition while strength was maintained, and even slightly improved.

[Click here](#) for more information about how to use **Borresperse Paper**



# BORRESPERSE PAPER

## NATURALLY STRONG

### TECHNICAL SUPPORT

Our competent technical and commercial team is available to evaluate your process and help you optimise the application of Borresperse Paper products, from installation to production.

Please [contact us](#) for further information.

### ABOUT US

Borregaard operates the world's most advanced and sustainable biorefinery. Utilizing natural and sustainable raw materials, we produce advanced and environmentally friendly bio-based products that replace oil-based products. Our world-wide network of production facilities, technical centres and sales offices assures the very best local service and competence where you need it. Providing our customers with the most dedicated technical assistance is essential to success. Therefore, we invest considerable resources for research and development. We continuously strive to develop wood based renewable products for existing and new applications and through this effort we can offer sustainable products that contribute to sustainable development in a wide variety of industries.

