Pulp and Paper Process News
#19 February - March - April 2010
UP TIMES

Duroblade®-Velvet™: More softness, more bulk, lower costs

The newest member of BTG's Duroblade family delivers extra-soft, extra thick tissue in both wet and dry creping applications.

BTG's Duroblade-Velvet™ has been specially developed to meet the needs of mills working in one of today's fastest-growing, most competitive markets. As global demand for tissue continues to grow steadily, thanks to new applications in segments like personal care and household cleaning, consumers are constantly on the look-out for softer, more luxurious products.

BTG customers working with both wet crepe and dry crepe machines are already reporting significant benefits in trials of Duroblade-Velvet, in terms of both product quality and overall production costs. Two test-bed mills both improved tissue bulk without any other changes to their production process, with one of them also able to reduce their fiber costs without any loss of product quality.

In dry creping, a mill which was already using Duroblade-Softcrepe™ blades was looking to further improve blade lifetimes and chip-resistance, while boosting tissue softness. BTG field engineers conducted a comparative trial with Duroblade-Softcrepe and Duroblade-Velvet set at a 75° bevel, retaining the same basis weight of 14.2 g/m2 and the same process conditions. The result was an 8% increase in tissue bulk, with Duroblade-Velvet delivering sheet thickness of 117.3 against the Softcrepe blade's 108.4. Chipping was reduced, and the end product retained its exceptional hand feel softness.

Cut back on furnish costs

In addition to improving tissue quality, Duroblade-Velvet gives manufacturers the option of lowering the basis weight of the paper, for significant potential savings on furnish costs as well as the ability to increase machine speed to boost output.

For applications where higher bulk is not needed, setting a 5° sharper blade bevel can achieve the same bulk level with a finer creping structure – a useful option for further improving hand feel softness and smoothness without any loss of bulk.

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Top-performing choice

Meanwhile, another BTG customer using a wet crepe machine to manufacture different towel grades (22-48 g/m2) and napkins (18-19.5 g/m2) wanted to retain the high bulk his products require while significantly improving blade lifetimes and quality consistency.

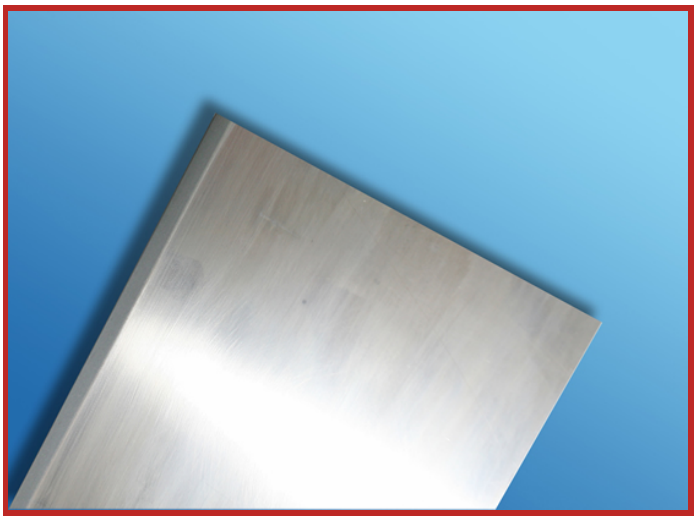

Figure 1: BTG's new creping doctor: Duroblade-Velvet

The mill manufactures towel grades using CTMP plus broke, and uses 100% virgin pulp for all other grades. Its regular 90° steel and long life creping blades could only deliver lifetimes of 6-12 hours, necessitating frequent blade changes and lost production time. Add to that the fact that the production process is a little different from a standard wet crepe application, and it was clear an innovative solution was called for.

BTG engineers' goal was to find a solution that could deliver at least 30 hours' blade lifetime, with high bulk, stable quality consistency, and good machine runnability. They chose to trial both Duroblade-Standard blades and Duroblade-Velvet blades in 90°, alongside the mill's standard steel blades – an inspired choice, since Duroblade-Velvet blades had not previously been used in wet creping.

The result: Duroblade-Velvet not only achieved 50 hours' blade life with very stable runnability, it delivered the best bulk results of all three blades tested, allowing the mill to reduce Basis Weight by 3% (1.3g), and to use 50% more broke in the mix without any loss of bulk compared with production using steel blades. That 3% reduction has resulted in huge savings on fiber costs – and one very happy customer.

To learn more about this application, contact Florent Bougerolle at florent.bougerolle@btg.com or go to www.btg.com