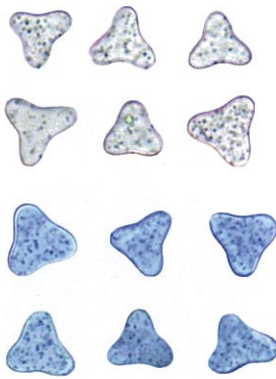


Shaped staple fibres made from polypropylene by FiberVisions can reduce a fabric's basis weight and deliver improved coverage (see also, page 20).



dryer on its own separate frame, for cleaning and maintenance of the roll-covering mesh.

### CARD DEVELOPMENTS FROM NSC NONWOVEN

The MD:CD ratio of the strength of nonwoven webs, particularly for wipes production, has also been a key consideration for NSC Nonwoven in its development of the new TT Excelle card.

Sales and Marketing Director Jean-Philippe Dumon explains that "In the past, it has been common to see a progressive drop in the physical strength of a final fabric and this loss of strength always comes with more fibre weight in the machine direction than the cross direction when wipes are produced at high speed."

With the TT Excelle card, however, it is always possible to obtain MD:CD strength ratios of less than 3:1, even at production speeds in excess of 250 m.min<sup>-1</sup>.

Extensive trials have already been carried out on the NSC Nonwoven pilot line, which is now available to the industry for evaluation tests.

In addition, webs produced on the card have shown an expanded bonding temperature range as the production speed increases, in combination with a gain in CD strength of up to 80%. This is as a result of the card design, which works the fibres more gently than conventional cards, in combination with low draft during the process, which preserves the web structure. Less fibre breakage also results in less maintenance and so higher productivity.

### LAMINATION AND PRINTING

Italy's A. Celli Nonwovens has recently finalized a project with a leading European producer of breathable textile backsheets for the supply of a multi-functional lamination

### Superior extrusion from Gneuss

Since the introduction of the Gneuss Multi Rotation System extruder in 2007, the device has quickly established itself as one of the key technologies for processing polyethylene terephthalate (PET) bottle flakes. This extruder's main advantage is that it permits the processing of PET without the need for pre-drying. Instead, it exploits a simple, water-ring vacuum system to process the PET into a high-quality product using its patented processing section.

Based on a conventional single-screw extruder, the Multi Rotation Section (MRS) is a drum, containing eight satellite single screws, and driven by a ring gear and pinion transmission. The barrels cut into the drum are approximately 30% open and provide optimum exposure of the melt. As a result of this design, the company says, the devolatilizing performance is fifty times greater than that of a conventional single-screw extruder—and this at a vacuum of only 2.50–4.00 kPa (25–40 mbar). By avoiding the needs for a high-vacuum system and pre-drying, the MRS is an extremely economical alternative to conventional technologies.

Further benefits are its simple and robust design, and its ability to remove volatile components and decontaminate the melt. Users can even process heavily contaminated post-consumer waste to make odour-neutral products.

(See also, page 15.)

line with printing capabilities. Celli will supply two, non-stop unwind stands, one for polyethylene (PE) film and the other for spunbond/meltblown nonwovens. The combination of these two machines enables unwinding and off-line/in-line slitting for the production of different finished products.

Celli designs its non-stop unwind stands specifically for projects where the producer of roll goods is seeking to expand its range and introduce the flexibility to make value-added fabrics. In addition to PE films and nonwovens, the company designs its non-stop unwind stands for a range of different webs, including paper and tissue.

The printer is designed to work with PE film and two colours. A fully customized winder (Windy) will be developed to produce high-quality reels with in-line slitting. The Windy's modular design allows it to be customized to suit different applications, which is what makes it particularly suited to projects such as this one.

A shaft and roll-handling system will be installed to process the reels coming off the winder. This will bring benefits to