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Nonwovens & Technical Textiles

NSC makes strides in nonwoven technologies

NSC Nonwoven designs, builds and supplies turnkey nonwoven lines for needlepunching, spunlacing, thermobonding, air-through bonding and chemical bonding. The lines are equipped with a supervisory control assistance system, which includes production recipes, maintenance and assistance to line management. NSC nonwoven is a worldwide, major supplier of Excelle® cards, crosslappers, ProDyn®, drafters, needlelooms, winders and slitters-rewinders.



Technical sales engineers of 11 nationalities present throughout the world ensure turnkey engineering, textile assistance, consulting, training, installation commissioning, and support for new and existing equipment. A nonwoven technical centre at the Asselin-Thibeau Tourcoing plant (France) with industrial lines designed for spunlacing, needlepunching and thermobonding technologies are at the customers' disposal to carry out their trials with high confidentiality.

NSC nonwoven Excelle® card

The Excelle® card is designed for a wide range of products with an output capacity over 450 kg/hr/m, a consistent web quality at high production level and a high productivity with minimum downtime and ease of maintenance. TSD® air flow, patented A frame®, LDS® and WID® doffing and transfer systems, IPC rack, quick frame opening, VarioWeb®... are just some of the innovations of that new Excelle® card.



The Excelle® card: Is easy to operate, allowing operators to see it all areas; Is set easily to change from product "A" to product "B" without much trouble; Prevents from fibre accumulation and web stripping troubles; Is designed for its operators and its maintenance technicians; Has intelligent electricians and a safer operator environment; Is designed to sustain a high production level; Is price competitive. The Excelle® card is designed for: Web quality depending on product specifications; High production level with a consistent web quality; Easy settings for the optimum parameters; Low maintenance requirements (downtime reduced to a minimum).

Whatever the final product, the bonding technology, the type of fibres or the required production, there is an Excelle® card model to answer these needs.

The VantageWinder: a cocktail of innovations for seamless operation

The high-performance, reliable multi-tasking VantageWinder easily caters for a wide range of nonwovens thanks to a unique regulation system, with operation independent of the winding torque, roller presser and tension imposed on the web. In particular, it produces perfect reels up to diameter 3,500mm – even on bulky, soft and low-tensile strength nonwovens.

The major benefits are: Automatic threading of webs; Totally automated reel changing; Continuous control over the winding process and the tensile load applied to the web, particularly during the splicing phases. The Vantage mother reel winder, the VantageSlitter and the new EasyWinder now complete its range of cutting and winding machinery.

NSC Nonwoven is addressing producers of lightweight nonwovens who are constantly seeking product enhancement and



increased winding speeds. NSC Nonwoven invites them to explore its entire new VantageWinder machine range, the result of an intensive R&D and fine-tuning mission. All the ingredients are combined to ensure NSC nonwoven masters each component of the production line and adds real value for customers in terms of innovation.

The ingredients for success

Good recipes always rely on the right basic ingredients. When constructing a machine, these ingredients are technical skills and experience in the textile business. In 1999 the company Monomatic France and its Italian subsidiary joined the packaging business unit (NSC Packaging) of the NSC Group. This cardboard packaging specialist from the Alsace contributed to its know-how in high-speed winding.

In 2002 the Group acquired Meridiana. This Italian winding machine manufacturer consolidated the Group’s technical know-how and its extensive textile experience in winders designed specifically for nonwovens. Add to that the reinforcement of the technical teams and the active support of the Group’s electricians and automation specialists and all the basic ingredients were there to develop and market a new range of machines.

The NSC Nonwoven teams contribute to both total commitment and know-how. The synergy of the various skills amplified the bubbling up of ideas and added piquancy to the project. This policy – tried and tested for the Thibeau® Excele® card highlights all the innovations vital for the inter-dependent relationship of the card and winder combination. The tension of the product, the nip and winding torque are the three vital parameters of the winding technique. To control each of these three parameters during the winding phases, the parent reel is subject to permanent double supervision:

- * by the mother roll primary carriage at the reel centre.
- * by the support winding drum (Pope w-inder) on the reel surface.

The speed and pressure adjustments at the reel centre and surface guarantee total control of the three vital winding parameters. However, when changing the reel two carriages are working at the same time. The primary carriage drives the completed reel to the storage zone and the secondary one takes its place in contact with the Pope winder. With two carriages and a single Pope winder, the three vital parameters would no longer be controlled during the reel-changing phase.

Therein resides one of the VantageWinder’s innovations. The tension, nip and winding torque are supervised and adjusted including during the reel changing phase. The textile and technical characteristics of the reel remain constant from start to finish. For a thermobonded spunbond line of 4.2 m width manufactured at a rate of 600 m/min, each change of reel corresponds to 5,000 m² of product, that is one minute to change a reel of diameter up to 3,500 mm. VantageWinder users rely on the constant characteristics of their products, including the 5,000 m² at the start and end of the parent reel.

The second Pope winder also represents a considerable advantage during the phase of winding a product prone to elongation and/or where thickness is vital, such as for spunlaced staple fibre nonwovens. So the VantageWinder is totally suited to a wide range of nonwovens thanks to its eleven adjustable and programmable parameters allowing independent action on winding torques, roller pressure and tension of the web.

Unique technological know-how

The programmable control and automated winding of the product extends the list of NSC nonwoven innovation in this field. All these simplifications, transparent to the line operator, enhance the range of winders offered by NSC Nonwoven. The EasyWinder combines in one machine, the winding and cutting of reels up 1,200 mm diameter. Combined with the EasySlitter, parent reels of 1,800 mm diameter are possible for high quality rolls in small series.

The VantageWinder can be combined with the VantageSlitter to cut daughter reels to measure, in accordance with the end customer’s specifications up to diameters of 2,200 mm at a rate of 1,500 m/min. Whether spunbond or staple fibres, NSC Nonwoven offers a complete range of innovative machines to complement those of Rieter Perfojet.

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active role being played by the new Union Textiles Minister, Mr Dayanidhi Maran. Mr Maran has already got into business, and seems to have successfully conveyed his strategies to the Finance Ministry.

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