

Quality is critical for spunlace nonwovens

USTER® JOSSI VISION SHIELD removes contamination and minimizes waste.

Picture 1: Even the tiniest fragments of foreign matter can be detected and eliminated with the USTER® JOSSI VISION SHIELD.

When textile products are intended for critical end-uses, there can be no compromises on quality. Nonwovens manufacturers, for example, must deliver the highest levels of quality when supplying fabrics for medical, personal care and hygiene applications. These products must both look and feel virtually perfect, to meet the expected standards for cleanliness and comfort, especially when they come into contact with human skin in use.

So, any contamination in these fabrics is a potentially disastrous quality risk, leading to claims and returned rejects. Zero tolerance levels for defect larger than 1 mm are standard. Tiny fragments of foreign matter in the fiber could remain visible as unsightly blemishes, as well as scratching or abrading the user's skin.

Typically, fabrics for these sensitive applications are made by the spunlacing process, which starts with the fibre raw material in loose stock form. This is where it is crucial to remove any contaminants, before they reach the fabrication process. At the same time, the nonwovens producers must preserve as much valuable 'good' fiber as possible, minimizing waste to maintain plant efficiency and profitability.

Powerful technology

The USTER® JOSSI VISION SHIELD fibre cleaning system provides maximum detection of contaminants with minimal waste. Located in the ideal position, after

fine opening in the blowroom, the system uses latest-technology spectroscopes to pinpoint even the smallest particles of foreign matter in the cotton or man-made fiber raw material.

Covering a much wider wavelength than conventional camera systems, USTER® JOSSI VISION SHIELD has the power to identify and remove fragments as fine as a single human hair. At this stage in the fiber preparation routine, detection is enhanced, since the fiber tufts have the optimum opening to prevent any small contaminants being hidden inside them.

Once identified, the foreign matter pieces are automatically ejected by the system, preventing contamination of the spunlaced fabric. Some waste here is inevitable, but USTER® JOSSI VISION SHIELD controls this by continuously measuring the speed at which the fiber tufts pass through. It then uses precision

valves to time each ejection perfectly, so that only the unwanted contaminant is removed, with an absolute minimum of good fiber being lost. Therefore, the cost savings for the producer can be significant.

Security against quality claims

The quality demands facing nonwovens manufacturers in these key applications are stringent. For example, it is clearly unacceptable to allow any kind of stray material in hospital products such as absorbent cotton, alcohol swabs, or surgical gauze. Claims and complaints would certainly have a serious impact on the producer's reputation.

USTER® JOSSI VISION SHIELD gives spunlace producers the confidence and security to avoid quality issues in this demanding marketplace. Its technology can cope with both IR and UV light ranges and it can reliably detect various types of foreign matter. All kind of synthetics and even the finest scraps of white polypropylene – otherwise difficult to pick out – are efficiently removed, using the USTER® JOSSI MAGIC EYE in tandem with the USTER® JOSSI VISION SHIELD.

This technology combination empowers nonwovens producers to take control of contamination at the highest levels of quality and efficiency, making investment USTER® JOSSI VISION SHIELD a logical choice for fiber cleaning. ♦



Such products must look and feel virtually contamination-free.