

# Mouse-Free Coiling with CLEANtube



Enhancing sliver quality

# Enhancing Sliver Quality with CLEANtube

**CLEANtube – the option for intelligent control of the coiler speed on the Rieter draw frames – prevents trash particles and short fibers from accumulating in the sliver duct. The result is a mouse-free sliver that assures constant quality and reduces not only operator work but also the amount of waste and the number of ends down. At Rieter’s customer Gupta Threads Ltd. an in-mill study showed the advantages of CLEANtube on the autoleveler draw frame RSB-D 50.**

Economical yarn production is a major challenge for the spinning industry, as cotton prices have risen sharply and recently there has been a steady increase in short fibers in the cotton traded and supplied. In general, raw material cost accounts for around 55 to 65% of the total yarn manufacturing costs. Even a slight improvement in yarn realization can lead to impressive results.

## The “mouse” – a challenging trash accumulation

When processing waste- and noil-rich blends on a draw frame, trash particles and short fibers can accumulate in the sliver duct of the coiler during can filling. Once the can is full, the draw frame stops and this accumulation, known as “mouse”, comes to rest on the top sliver layer (Fig. 1). This can cause trash deposits in the rotor groove, which in turn result in ends down in spinning. If the mouse gets into the yarn, it causes significant yarn and fabric defects. To avoid this, the mouse is usually removed by the operator which causes additional work and generates soft waste of about half a sliver layer (Fig. 2).

In case of a draw frame stop during the can filling, the mouse ends up in the can. Consequently, there is no way for the operator to remove the mouse, which also leads to the problems mentioned.



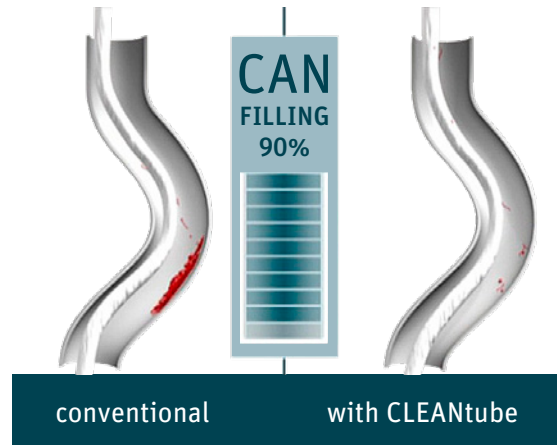
Fig.1: Trash particles and short fibers on the top sliver layer



Fig. 2: Removing the mouse generates soft waste of about half a sliver layer

## CLEANtube to avoid accumulation and to enhance profitability

CLEANtube ensures that the sliver touches all surfaces of the coiler tube (Fig. 3) and, thus, keeps it free of accumulations. The CLEANtube function of the RSB-D 50 ensures consistent sliver quality (Fig. 4) and keeps the spinning process at a high efficiency level. Finally, it also ensures the quality of the yarn and fabric.



**Fig. 3:** CLEANtube ensures that the sliver touches all surfaces of the coiler tube and, thus, keeps it free of accumulations



**Fig. 4:** Sliver with consistent quality



## Reduction of man-hours, waste and ends down by using CLEANtube

Using the option CLEANtube on its draw frame RSB-D 50, Gupta Threads Ltd. achieves a mouse-free sliver and, therefore, was able to reduce man-hours, waste and ends down – and the quality of the yarn has also been assured.

An in-mill study at Gupta has shown the following advantages using CLEANtube:

- 500 work-hours can be saved per draw frame per year as the operator no longer needs to remove the mouse manually.
- When removing a mouse by hand, the operator typically takes away about half a sliver layer. This corresponds to about ten meters in length. Even if it can be reused as soft waste it leads to additional conversion costs in blowroom, carding and drawing – those further expenses of up to EUR 1 300 per year and RSB can be saved.
- By eliminating the mouse, ends down are reduced. Approximately around every tenth mouse results in an ends down at the rotor spinning machine.
- Spinning a mouse into yarn leads to an increase in yarn mass of up to 100% with a length of about six meters (Fig. 5). Finally, these defects are clearly visible in the woven fabric (Fig. 6) and mean a high risk of rejection of the fabric. Such financial damages can be avoided by using CLEANtube.

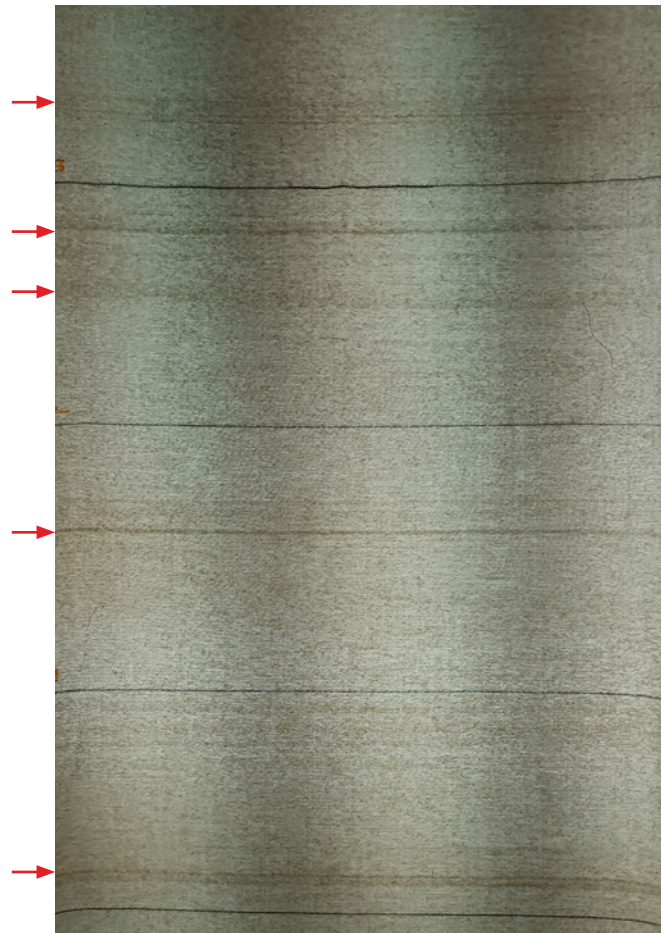


Fig. 6: Visible defects in the woven fabric

### Diagram Mass

Cut length: 0,1m, IPI: -50/+50/+200%

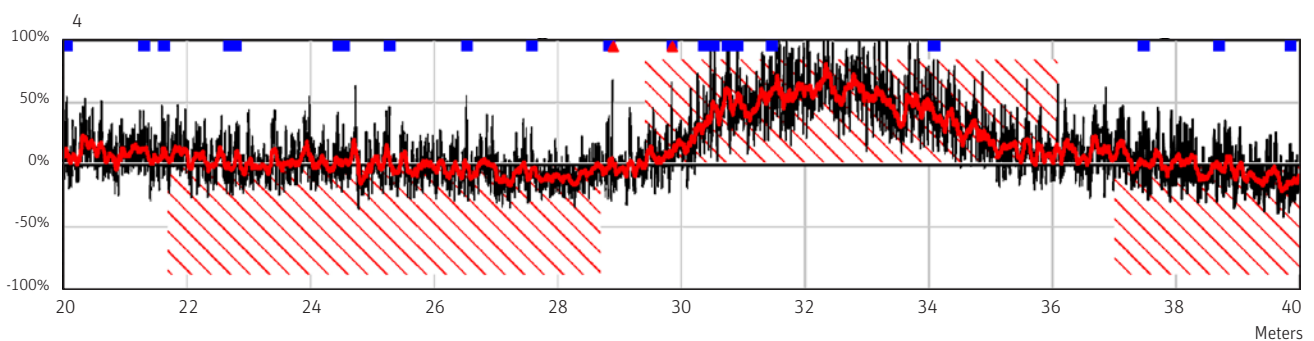


Fig. 5: Spinning a mouse into yarn leads to an increase in yarn mass of up to 100% with a length of about six meters

## About Gupta Threads Ltd.

Founded in 2012, Gupta Threads Ltd. is based in Samana, Dist. Punjab, India. In their spinning mill with 3 744 rotor spinning positions, they produce 100% cotton yarn with a count range from Ne 7 to Ne 30 with high strength. The raw material used is mainly a blend of 60 to 70% waste or comber noil along with 30 to 35% cotton. The yarn is used for T-shirts, printed shirts, home textiles and towels. Gupta Threads Ltd. sells in domestic market but also exports to various countries. They only use Rieter draw frames in their mill, one autoleveler draw frame RSB-D 50 and four older RSB double-head models.

### The Customer's Statement

*"CLEANtube is an excellent feature of the Rieter draw frame RSB-D 50 for mouse-free sliver which results in quality assurance while reducing the operator's work load."*

**Pratap Singh Chouhan,**  
General Manager, Gupta Threads Ltd.



Pratap Singh Chouhan, General Manager at Gupta Threads, benefits from quality assurance while reducing the operator's workload.



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3591-v1 en 2309

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