

Solving winding problems for paper producers

LunaReel: A new generation of reel drum covers

Paper producers know: winding problems mean wasting paper. Plus, winding problems also mean big trouble for printing presses and copying machines. To reduce these problems, years ago Voith Paper developed rubber reel drum covers. And now, Voith Paper is introducing a new generation of high-tech reel drum covers: LunaReel.

In the past years, practically all new high-speed paper machines producing coated and/or calendered paper have been equipped with rubber reel drum covers. By comparison, older machines without rubber covers often waste considerable amounts of paper due to unwanted winding problems. Typical winding problems include: misalignments, blow-outs, creasing, stretching, glossing marks and interlocking.

Illustration 1 shows the function of a soft reel drum cover. The soft nip, between the reel and the tambour, allows the paper to be pressed uniformly. During paper winding, this soft nip minimizes trapped air pockets and other disruptions which are a main reason for winding problems.

The following questions however, should be answered before installing a reel drum rubber cover:

- Will a rubber reel drum cover really solve the winding problems?
- Are the technical controls compatible or should they be adapted?
- Are mechanical modifications required?

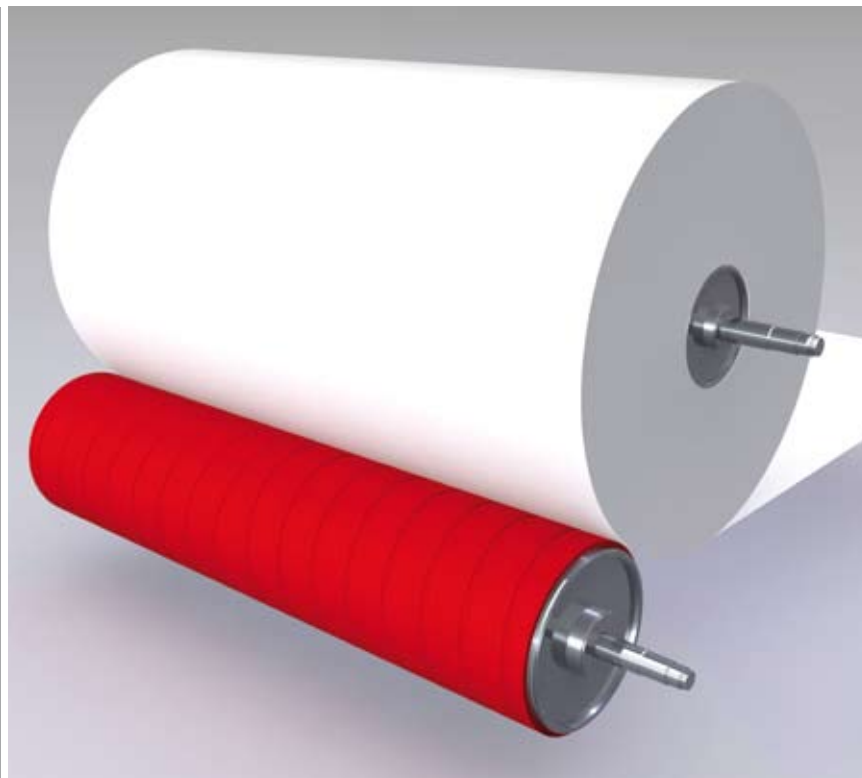
Through a Voith Paper pre-audit, these and other questions can be answered. Current problems are then examined in detail and the entire system's improvement potential can be evaluated. These are key considerations, because rubber reel drum covers need to be routinely regrinded, and a spare roll is usually recommended. In general however, for older paper machines it takes 12 to 15 hours to change over the reel drum.

The LunaReel Concept

The new LunaReel concept offers paper mills two different types of reel drum covers – to match their operating needs: the LunaReel S and the LunaReel E.

The LunaReel S is the standard version with high-tech fiber-reinforcements. While the LunaReel E is the extra-strong version, offering added mechanical stability with higher abrasion resistance and running times of over 18 months.

Fig. 1: Reel drum in contact with paper.



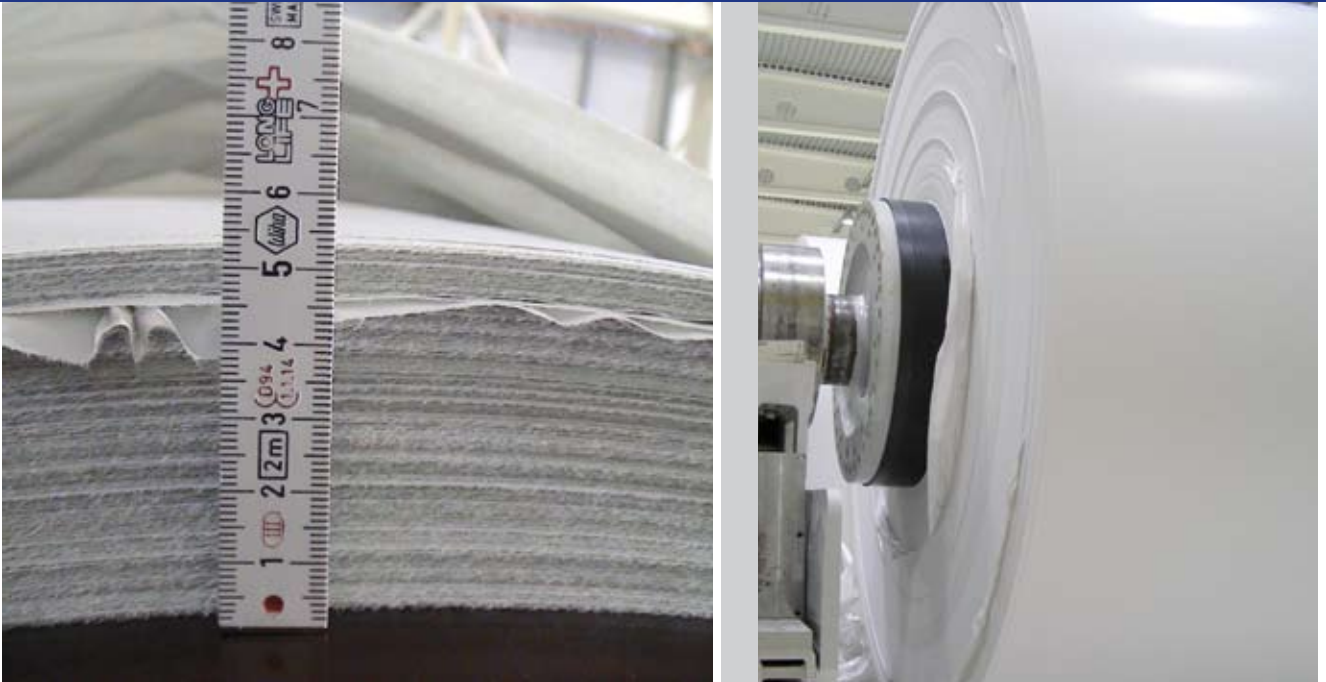


Fig. 2: Examples of winding defects.

Both versions of the LunaReel are based on Voith Paper’s extensive production experience and advanced materials research.

As a result, LunaReel offers customers major advantages:

Longer running times thanks to fiber-reinforcements, higher abrasion resistance and mechanical stability. LunaReel covers have a uniform nip which minimizes tearing as well as other problems. Plus, LunaReel covers retain these characteristics throughout their lifetime: LunaReel covers barely weaken with age – they don’t get hard – they don’t crack; furthermore, a reliable, uniform coefficient of friction throughout the lifetime for more precise handling of the paper web.

Throughout the development the following aspects were considered:

On the one hand, high-tech materials in LunaReel covers give them a better

grip or hold on the paper. Here, special filling materials are used which give the covers a rougher appearance – but this does not affect the paper’s sensitive surface. This is big advantage, because uniform reel friction means non-stop paper production – without changing the tambour’s winding settings.

On the other hand, increased mechanical stability of the reel drum cover occurs through fiber reinforcements. As a result, tearing on perforations and splitting through paper winders can be avoided or reduced to a minimum.

The start-up operation can be supported by Voith reeling experts, including the optimization of winding settings and onsite training for local production teams.

The change to rubber reel drum covers improves paper quality and the amount of waste paper can be reduced by 100 to 200 tons every month.

On Focus: LunaReel

ProRunnability
 ProQuality

Section: reeling
 Width: all
 Paper grade: coated and/or calendered papers

Contact



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