

Improved qualities of nonwovens based on high performance fibres due to optimised card clothing and online wear analysis

HPF Garnitur
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During processing of high performance fibres into nonwovens, an increased abrasion of the metallic working elements (like e.g. card clothing) occurs. This leads to premature wear of the card clothing and higher processing costs. To improve this situation, the futureTEX-project "HPF-Garnitur" considers on one hand the optimisation of card clothing regarding the material surface and profile of the card clothing; on the other hand a digital monitoring system for control of the card clothing abrasion will be developed.

Less fibre breakage and other damages can be expected as result of the optimisation, leading to higher nonwoven quality. Moreover the digital monitoring system enables a maintenance-optimised process management in terms of 'Industry 4.0'.

Aims

- Tailored card clothing concerning material surface and profile
- Higher nonwoven quality through adapted card clothing
- Development of an online monitoring system to control the wear level of the card clothing



Advantages

- Reduced abrasion due to adapted card clothing
- Less fibre damage leads to higher nonwoven quality
- Determination of the degree of wear level due to online analysis
- Maintenance-optimised process management in terms of Industry 4.0



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