

Open-heart surgery

Measuring tension during ongoing production. TASK calibrates exact dryer fabric tension using mobile measuring devices without causing any downtime. At 100 degrees Celsius, that is one hell of a job.

Correct dryer fabric tension is vital for paper machines. Just like blood pressure, too much or too little tension really can have significant adverse impacts.

When the first symptoms occur consult the specialist immediately

When tension is too low the dryer fabric has the potential to slip over the guide rolls, the dryer cylinder or the paper web itself. Also, the paper is not pressed strongly enough against the surface of the dryer cylinder. The consequence: Heat transfer to the paper is reduced and therefore the entire drying process is impaired.

Too high dryer fabric tension is equally critical. The guide rolls can suffer from deflection and the seam shows a bowed profile over the machine width. The dryer fabric literally has its breath taken away. Air permeability and with it drying performance are severely reduced. Too much tension may even lead to a break of the guide roll shaft, which means heart failure for the paper machine.

For this reason, at the first suspicion of a discrepancy it is vital to contact our specialists. This is what happened in the present case: A papermaker suspected deviations between actual and displayed values in the process control system. A case for TASK.

Staying cool at over 100 degrees Celsius

How to measure tension without interrupting ongoing production? TASK has the right technology for just this kind of challenge. Equipped with mobile measuring devices our colleagues step into the danger zone, the upper area of the dryer section. Depending on machine and paper grade the heat in there can exceed 100 degrees Celsius. Added to this there is extreme humidity. Nobody can survive this without wearing a special heat protection suit.

From the factory's compressed air system heat protection suits are supplied with compressed air via an air hose with an upstream pressure regulator and air filter. This forms an insulating layer between suit and body. Cooled in this way, tension variations in the dryer fabric can be measured with the necessary calm and time.

In the case described, values determined in this way were compared to those in the process control system and the customer received the necessary recommendations for long-term restoration of optimum dryer fabric tension.

Any questions?

I look forward to your call.

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