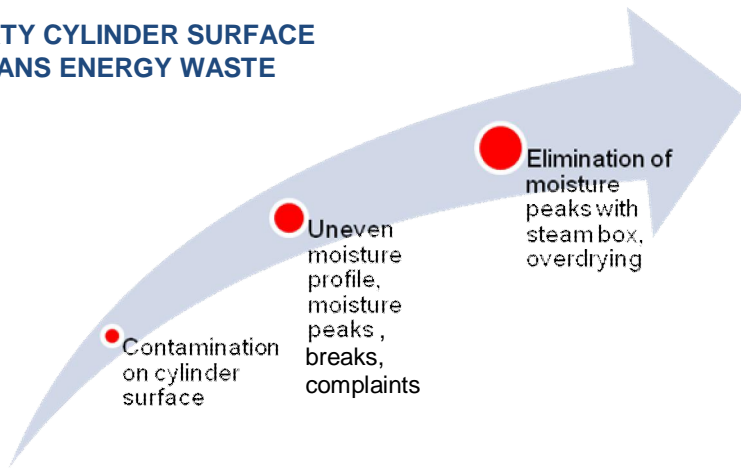


CLEAN CYLINDER SURFACES IMPROVE DRYING EFFICIENCY AND QUALITY

Dirty cylinder surfaces create many problems in PM drying section. Energy waste, paper or board quality problems and production time waste mean significant profit loss for the paper mill.

With an efficient cylinder surface cleaning it is easy to eliminate these problems. Reduction of energy costs, improved quality and additional production efficiency mean increasing profit for the paper producer.

DIRTY CYLINDER SURFACE MEANS ENERGY WASTE



ENERGY COSTS EASILY INCREASED BY 7%

Dirty cylinder surface creates uneven moisture profile and moisture profile peaks. These peaks are usually eliminated with the steam box, moisturizer and with over-drying. As a result, easily 7% additional energy costs are created.

Dirty cylinder surfaces also prevent effective heat transfer from the cylinder to the paper web. This means decreased drying efficiency and additional steam consumption for drying, also resulting in increased energy costs.

DIRTY CYLINDER SURFACES CAUSE PAPER QUALITY PROBLEMS AND ADDITIONAL NEED FOR MANUAL CLEANING

Dirty cylinder surfaces also worsen the paper or board quality. Dirt and contamination like fibers, fillers, stickies and chemicals accumulate on the cylinder surface and sticks into the paper web. This creates paper defects, other quality problems and sheet breaks.

Dirty cylinders must be cleaned manually very often. Cleaning takes time, meaning production time waste and additional cleaning costs.





CLEAN CYLINDER SURFACE IMPROVES DRYING EFFICIENCY AND QUALITY

Clean cylinder surface has a straight impact on drying efficiency. Elimination of the insulating dirt layer improves the heat transfer into the web. It clearly helps to maintain an even moisture profile, which decreases energy costs as there is no need to correct the profile with the steam box or over-drying.

Clean cylinder surfaces also improve the paper or board quality. In addition, it enables the mill to achieve better CD tensile strength in earlier stage of the drying section.

The efficient cylinder cleaning also means improved drying section runnability and higher permeability of dryer fabrics, because the dirt particles are removed before spreading to the process.

REFERENCES

“ We have 40 references in Europe in paper and board machines. We have delivered EV ReDoc system to many different kinds of machines and grades, for example special baking paper, silicone coated and filter paper.”

Some examples of our deliveries:

Stora Enso: coated fine paper, printing paper and liquid packaging, Finland
M-Real: LWC base paper, folding box board, coated fine paper, Finland
Ahlstrom: label paper, Finland and filter paper, UK

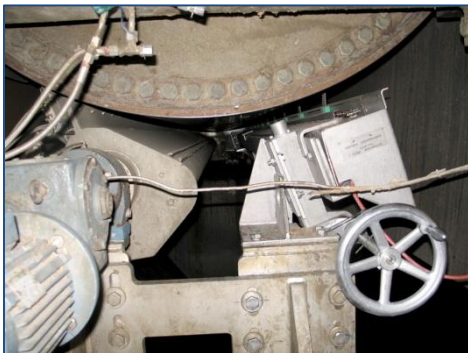


Metsä Tissue has 6 EV ReDoc units in PM 7 and 4 units in PM 5. The grade is special baking paper.

Production has increased 24 000 to 30 000 tons/year and problems with contaminated cylinders have disappeared in MetsäTissue Mänttä. The mill has received great feedback from end-customers about better paper quality.

Ahlström Chirnside PM 22, UK, has 2 EV ReDoc units. The grade is filter paper.

The mill had a problem with build up on the dryer cylinder after the acid section that could not effectively be cleaned with normal doctors only. According to the mill, the situation was certainly improved by the EV ReDoc system.



EV ReDoc® is a continuous reconditioning system for paper machine cylinder and roll surfaces. EV ReDoc -system eliminates dirt like stickies, fibres and coating colour from cylinder surfaces by using steel brushes.

Even old and worn out cylinders can be cleaned effectively with the help of EV ReDoc. Conventional doctoring system is not able to keep cylinders clean. EV ReDoc -system can be used with an existing doctoring system.