

Base Paper on Productivity in Small and Medium Paper Mills

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The need for productivity in the paper industry is more acute than in certain other industries, because of shortage of raw material, the acute need for quality upgradation and most importantly the need for sustaining the cost of paper.

While we can explain away certain basic costs like energy and fuel etc., we have to compete in other costs towards achieving an international equivalent of paper cost.

In this paper the reference will be mainly towards the paper machine which is common to both the small and medium mills. Also because the pulping varies from mill to mill as per the variety of raw material.

The productivity of a paper mill is dependent on its ability to produce quality paper because if the strength properties vary the paper machine runnability is poor and consequently the chemical consumption also goes up.

A stress in this paper is laid more on the quality for that reason and also for productivity.

APPROACH FLOW SYSTEM

The approach flow system in most mills is not well conceived and this results in not getting the maximum strength from the fibre. Somehow approach flow design has not been given as much importance as, say, the wire part. The approach flow system should be so designed that the velocity of the stock flow at the slice should be adjustable to the machine speed, naturally the wire speed.

Stuff box systems have heavy turbulence and the consistency regulators are not calibrated to the desired dilution.

FIBRE LENGTH AND DRAINAGE

I would like to blow out one misconception, that natural short fibres drain slowly—the wire lengths are unnecessarily increased.

From our experience we find that for the same fibre length cut fibre drains slower than uncut fibre and with modern drainage devices there seems to be no reason to increase the wire length unless if high speeds and heavy grammages are involved,

VACUUM SYSTEM

Possibly there is a need for increasing the vacuum in most cases, but the vacuum line requires careful design with regard to the suction couch and the piping.

PRESS SECTION

With modern press sections and newer felt qualities we feel that this is not a weak point, if the sheet is made well and the system is fairly streamlined without any foam or slime problems.

DRYER SECTION

With modern felts and paper sheet leaving the

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press section with less moisture, attention to siphon systems and properly designed condensate systems is vital.

DRIVE

For increasing the speed of the machines and at heavier grammages the drive can be normally modified by helper drives etc.

Smooth plastering of the Thyristor room walls with adequate air conditioning reduces systems failures.

CONCLUSIONS

Another vital point is that we should strive to increase the retention of fines and Talcum in the paper as this will lead to overall improvement in efficiencies.

We must strive to improve the quality of our paper to international levels. We have the talent and the resources but we don't seem to have the courage. Let the paper industry lift itself up by the boot straps and make better and more paper, efficiently.