



*Example for SSB Design:
PrintForm HS.*

Forming fabrics for a challenging grade

Demands for newsprint fulfilled

The introduction of color printing has caused a revolution in newsprint quality demands. The correct forming fabrics will help the papermaker to produce a top quality sheet without marking that will meet the current high quality standards for smoothness, porosity, formation, two-sidedness, etc. The best forming application to meet all these requirements is a balanced choice based on the specific performance demands and wishes from our customers.

The main catalyst for this quality improvement in newsprint grades was the growing interest from professional advertisers for this medium. Newspapers have a huge advantage of high circulation numbers at relatively low costs, which enables advertisers to reach millions of people almost daily with up-to-the-minute offers and messages!

In order to keep the early adopters satisfied and attract new advertisers, the newspaper had to become a competitive medium in the world of advertisement papers

and is still seen as such today. Not only the print quality had to be improved, but simultaneously the speed of the printing presses increased significantly. New printing techniques have been introduced and modern, fast drying printing inks (often with an increased tackiness) were developed.

To keep up with the wishes and demands of the printing houses, the producers of newsprint were faced with some pretty interesting challenges. Significant improvements in surface strength and smoothness, a clear reduction of porosity and a

minimum two-sidedness were new targets to meet.

As if these challenges were not yet interesting enough, other industry trends also had to be dealt with at the same time. Paper needs to be produced on ever wider and faster paper machines. Higher percentages of recycled fibers are used and thus furnish quality deteriorates. Finally there is also the trend towards lighter paper weights to save costs, which makes things even more complicated. How to control print through, dusting, hickies, smearing and linting?

Many disciplines in the chain of the modern papermaking process needed to come up with inventive solutions to help the paper producers to meet the demands of the printing houses.

Paper machine builders, producers of paper machine clothing, chemical companies and filler suppliers have helped the paper maker with their challenges. The result is impressive: a top class 45 gsm newsprint sheet from 100% recycled fiber, produced at 120 km/h on an 11 meter wide machine can meet the quality and runability demands required by the most modern printing presses.

Forming fabrics for newsprint

Nowadays, SSB fabrics are the number one design for modern newsprint machines. The benefits from this design versus conventional fabrics have been widely recognized and accepted. The newsprint industry has been among the first to try this new fabric design and are still receptive to new ideas.

Benefits of SSB fabrics

The answer to this question could differ per individual user. However, the most common advantages are:

1. Reduced fabric marking
2. Reduced chemical consumption
3. Reduced porosity levels
4. Improved fabric life
5. Clean run
6. Good profile quality

Most of these benefits are a result of the huge step in FSI and support points when changing from a fine DL to

SSB fabrics. With its plain weave fabric surface and the fine MD and CD yarns on the paper side, SSB fabrics more than tripled the amount of support points and more than doubled the FSI numbers in comparison with the fine DL designs.

The reduction of marking when replacing a fine DL with an SSB fabric is evident, especially on those machines that use 100% recycled furnish. The typical 8 shed diagonal disappeared and the very fine “screen” from the SSB surface is often hardly visible with the naked eye.

Also a clean fabric run, with low fiber carry back and reduced fiber bleeding are positive effects of the higher support points and FSI numbers.

“We are convinced there is an SSB solution for every newsprint machine in the world. The right application will provide our customers certain benefits versus conventional designs. We proved how successful our clothing is on the fastest newsprint machines,” said Martin Serr, Business Development Manager Forming/Europe.

New challenges

Among the major PMC suppliers, there is a fierce competition going on to have the finest SSB design in their product range. However, all PMC suppliers are facing certain limitations when going finer and finer with their SSB designs. In order to further increase the FSI numbers and the amount of support points, more yarns per centimeter have to be used in the weave, which

will have consequences for the surface open area if the diameter of the yarns is not reduced. And this is the very crucial point! The physical properties of the finer yarns are a major concern to the industry. How can the necessary stability be achieved from 0.08-0.10 mm yarns? How can the elongation figures be controlled? Will these super fine yarns have enough resistance against high pressure showers, etc.?

At first glance, two contradictory trends are running simultaneously. On the one hand, paper machines are getting wider, faster and running with higher fabric tensions, while on the other hand, the forming fabrics are getting finer and finer!

Today, PrintForm HS and HQ are very successful designs on the market that help papermakers improve the quality of their paper and increase efficiency of the machine. But there is more to come in the near future.

On Focus: SSB fabrics

ProEnvironment	++	□	□
ProRunnability	+++	□	
ProQuality	++++		
ProSpeed	+++	□	

Section: forming
 Width: all
 Paper grade: all graphical grades

Contact



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