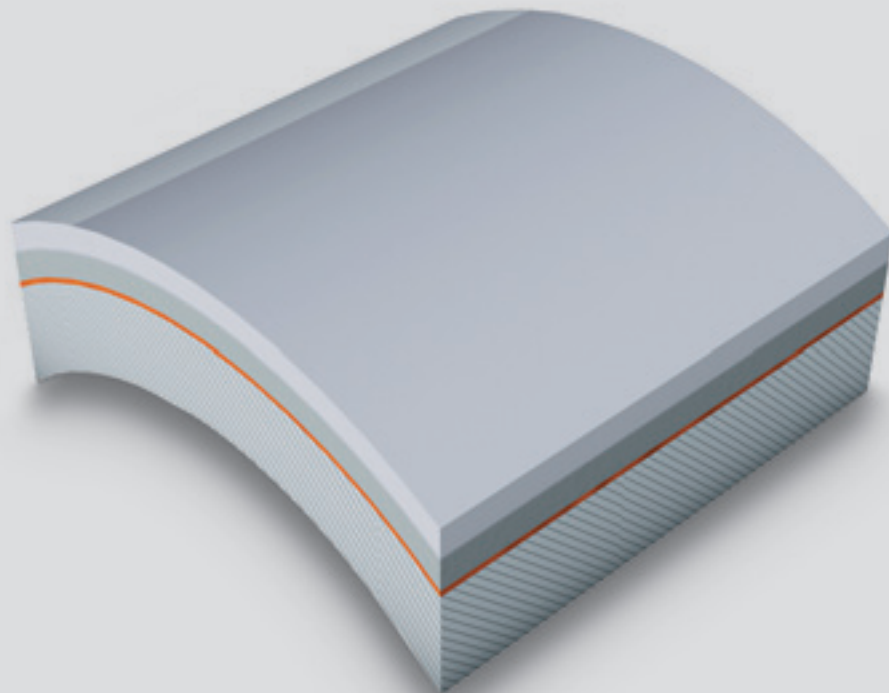


*Schematic structure  
of the NeoSilk calender  
roll cover*



Sizing, coating and calendering with trendsetting technology

## New Finishing roll covers

**Based on the Voith know-how and using the latest nanotechnology, Voith Paper Rolls has developed a new generation of finishing roll covers.**

The past decade has seen a transition from offline to online finishing technology. Simultaneously, the demands on paper machine equipment rose to fulfil the growing requirements of quality and efficiency. Sizing, coating and calendering are all key aspects of the finishing process. To meet our customer needs, Voith Paper Rolls has invested significant resources in the last few years toward developing improved roll covers for the finishing section of the paper machine.

The outcome of Voith Paper Roll's investment can be seen in the launches

of SolarCoat, a new polyurethane cover for film coating, and NeoSilk/NanoPearl, new composite cover lines for calendering.

### **SolarCoat – new polyurethane cover for film press rolls**

SolarCoat is the result of extensive tests carried out on Voith pilot film presses, and numerous field trials. The SolarCoat cover combines a hydrolysis resistant shell bonding system and a new polyurethane functional layer formulation optimized for all requirements on a film press.

**SolarCoat's features:**

- Stable nip conditions are attributed to the elimination of hardness variations and uneven swelling
- very high wear resistance for long running intervals (e.g. the cover reached a running interval of 13 to 16 weeks in two major applications)
- very high watability for a perfect film formation on the cover
- very high transfer rate for reduced misting and best coating quality
- low rod spitting at very high speed
- excellent dynamic and dampening properties for a smooth, vibration-free run also at highest speed.

**NeoSilk – cost-effective composite calender cover**

NeoSilk composite covers incorporate all the know-how accumulated by Voith in hundreds of calender applications. NeoSilk covers are cost-effective solutions designed to meet today's demand for conventional and modern calendering applications.

**NeoSilk features:**

- optimized filler and resin systems reduces wear and abrasion
- minimum grind losses to restore surface finish increases overall cover life
- excellent barring and vibration resistance
- optimized thermal characteristics improves load and temperature capability.

**NanoPearl – premium nano-technology calender cover**

The NanoPearl covers are the state-of-the-art calendering technology employing an enhanced nano-particle filler system. The nano-particles have been further optimized by introducing a dual component particle system: a hard phase and an elastic modification. These new nano-particles improve strength and stiffness while at the same time provide a dampening effect when impacted. NanoPearl covers are the world-class solution

for the most intense calendering applications and highest quality requirements.

**NanoPearl features:**

- nano-particle fillers allow significantly improved surface finish capability, improve the resulting paper surface qualities and greatly increase wear and abrasion resistance
- dual component nano-particle composition provides improved vibration resistance and enhanced elastic behavior
- heat generation is greatly reduced allowing higher operating speeds and requiring reduced power to operate.

**Contact**

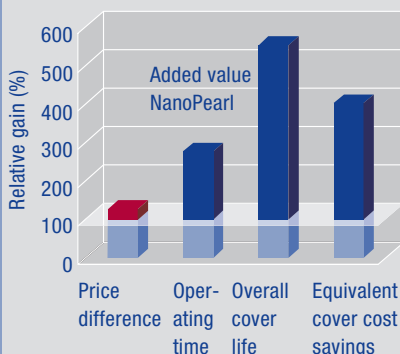


**David Brew**  
Rolls  
david.brew@voith.com

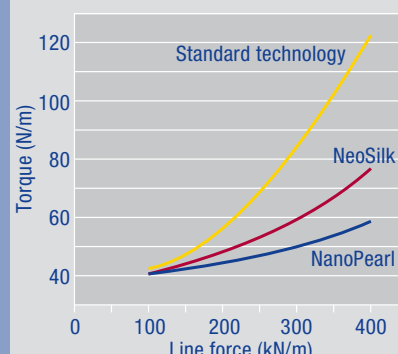


**Dr. Thomas Leitner-Kuzmany**  
Rolls  
thomas.leitner-kuzmany@voith.com

Cost comparison for supercalender application on coated paper



Power consumption reduction



NanoPearl covers with nanotechnology fillers: unrivalled quality for proven product advantages

