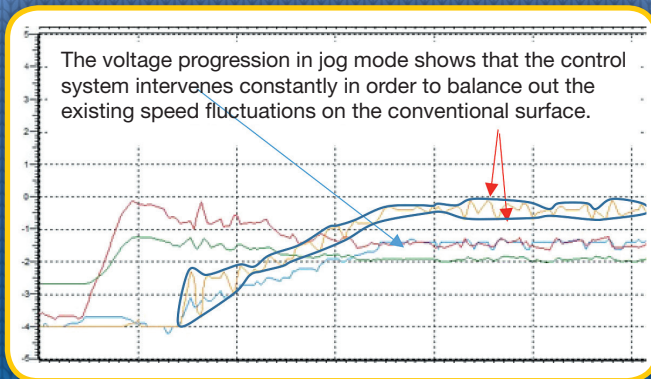


In order to initiate movement of the mirror-smooth surfaces which adhere to each other, enormous power is required. In the “standstill phase”, extraordinary forces are generated (1) which increase until finally the adhesive friction resistance is overcome and the parts are put in motion (3). Torque peaks occur (4). The resulting speed fluctuations (2) may lead to damage to your knitwear. In the subsequent running production, a higher amount of force is required (current supply and torque) to permanently overcome the friction caused by smooth surfaces (5).



The voltage progression in jog mode shows that the control system intervenes constantly in order to balance out the existing speed fluctuations on the conventional surface.

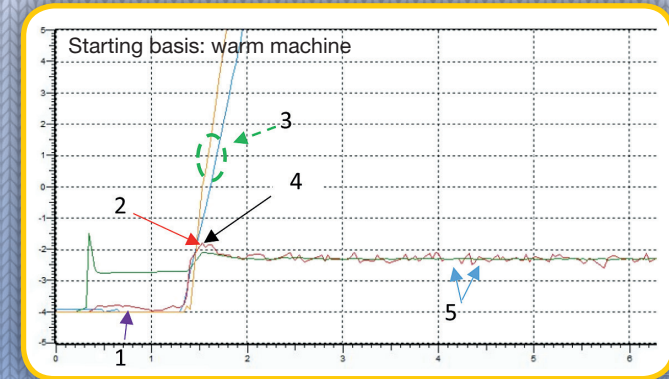
The proof:
nanoⁿ
Saves up to 12 % energy and prevents torque peaks and speed fluctuations on your knitting machine!

“We are delighted by the convincing test results which impressively verify which savings potentials and production advantages the newly-developed nanoⁿ technology provides.”

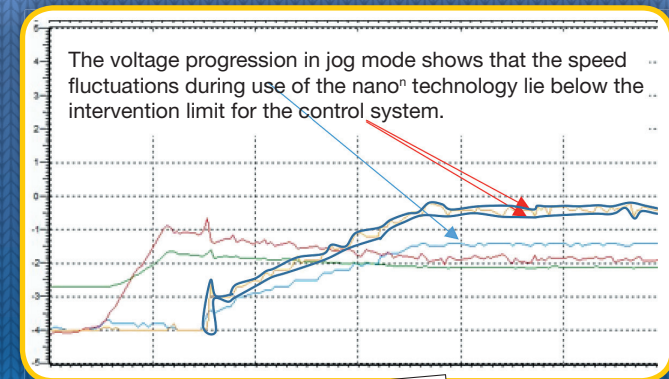
Thomas Keck, Leiter F&E



The test was conducted on two identical circular knitting machines with four knitting systems. Only the cylinder walls and the selectors on one machine were produced in nanoⁿ technology.



In contrast to the smooth surface, forces are first applied here if they are required for movement of the parts (1). The surface of the nanoⁿ technology which is characterized by microscopically-fine inclusions on the surface is thus in a position to retain an even oil film, making it easy to put in motion (3). The machine starts up without speed fluctuations (2) and without torque peaks (4). Production starts easily and evenly. The nanoⁿ technology reduces the friction generated during running production. The torque and the current supply are permanently reduced (5).



The voltage progression in jog mode shows that the speed fluctuations during use of the nanoⁿ technology lie below the intervention limit for the control system.

CH	AN	Inv	Code	Su	Name
1	✓	✓	28	1	AIN1 Eingangsspannung
2	✓	✓	56	2	Drehmomentenistwert
3	✓	✓	54	0	Motorstrom
4	✓	✓	51	0	MCTRL: Drehzahlwert

