



TerraGloss – the new hard calender roll coating.

The new thermal roll coating

Energy savings up to 30% due to TerraGloss

TerraGloss is the new thermal coating for hard calender rolls. Numerous field tests have shown that the assembling of TerraGloss leads to longer runtimes, partly even doubles it. Additionally, the line load and the heating energy can be reduced. This may lead to energy savings of up to 30%.

Each paper has special demands

The demands of the hard roll for calendering or smoothing of the surface differs in corresponding paper grades. Consecutively a few attributes are listed as an example:

- Packaging paper requires high smoothness and moderate gloss while maintaining the caliper.
- Coated and uncoated magazine paper requires a very smooth,

high gloss quality in a fast speed production process using an abrasive filler content material.

- For profile demanding speciality and art paper, often the caliper must be corrected with high energy transfer systems like CalCoil and Thermajet (auxillary heating systems) in the calender.
- Decor paper reacts sensitively to heavily loaded thermo roll surfaces.

The application of moisture/steam in front of the calender nip can free filler

material at the paper surface and intensely stress the thermo roll. The performance of the calender can be advanced with TerraGloss. Each desired paper property can be improved. Besides the improved paper quality, TerraGloss convinces through better durability of the factor 10 relatively to chilled cast iron roll, depending on the single case. According to the process demands, TerraGloss can be doctored intensively, but can also be driven without doctor blades.

Special production know-how

TerraGloss is the result of innovation and development: optimized material on carbide and nitride basis, highest kinetic energy during the coating process and a special grinding. Voith Paper developed a proprietary coating system, which is exclusively available to our shops. The customized hard material sizes, the selected filler matrix and the special finishing offer a compact layer of highest hardness and adhesion, which can be grinded to the highest tolerance.

Operating experience

Application engineer Kurt Landertshammer reports about the first application experiences:

“On a high speed paper machine in the LWC sector it was possible to reduce the heating energy of a thermal roll from 1,300 to 900 KW with identical calendering results. The reduction in energy usage yields a saving potential of several 100,000 euros each year.

In the Janus calender for the SC depression production, the durability of the thermal roll could be doubled with TerraGloss and the application of the micro-abrasive doctor blade Voith SkyTop T.”

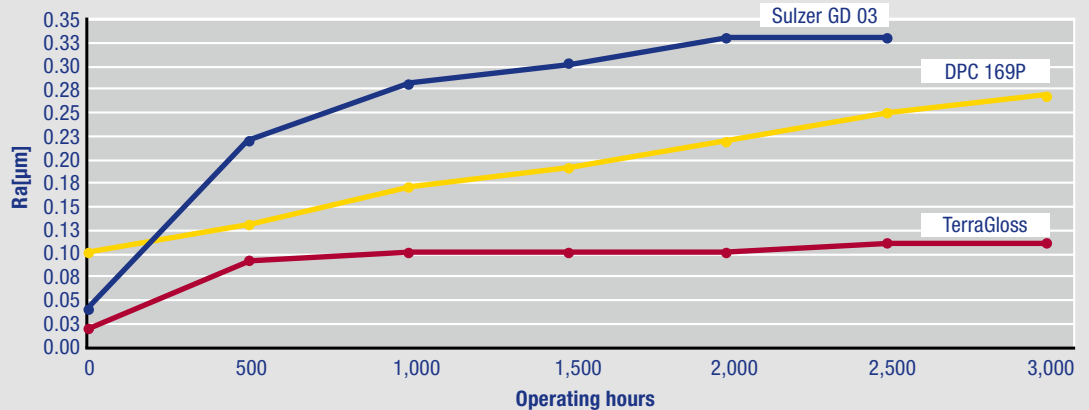
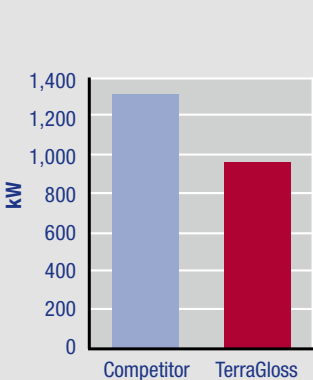
Infobox: TerraGloss benefits

- Reduced line load and heating energy at equal or improved paper quality, therefore energy savings up to 30%.
- High resistance against abrasion.
- Stability of the once adjusted surface roughness.
- High resistant to chemical and mechanical impacts.
- Due to the high hardness grade (up to 1600 HV), TerraGloss has longer runtimes.
- The state-of-the-art finishing improves the shape accuracy permanently, therefore complex energy adjustments can be minimized.
- Longer runtime of the thermal roll due to constant surface roughness and minimal abrasion.
- Positive impact on gloss and /or smoothness through wide roughness range (0.02 µm and 0.8 µm Ra).
- Micro-abrasive doctor blades (SkyTop T) can be used continuously.
- Highest resistance against contamination of the surface.
- Volume gentle calendering.
- Best profile also at the hard-/hard-nip without correction due to optimized grinding.

Contact



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Example of possible reduction of heating power with TerraGloss at constant paper quality.

Roughness process of the TerraGloss coating in comparison to competitors.